



Cook County Watershed Management Ordinance

Public Review Draft – June 24, 2013

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Metropolitan Water Reclamation District of Greater Chicago

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June 28, 2013

Greetings:

Subject: Draft Cook County Watershed Management Ordinance

The Metropolitan Water Reclamation District of Greater Chicago (MWRD) is pleased to present the Cook County Watershed Management Ordinance (WMO) for public review. The purpose of the WMO is to establish uniform stormwater management regulations for Cook County, and by doing so, help to prevent flood damages that can result from commercial, municipal, and residential developments. Paved roads, parking lots, walkways, and buildings make cities livable, but they also reduce the amount of land on which water can be absorbed. If communities grow without careful and thorough stormwater planning, sewer systems and local waterways can become overwhelmed and contribute to flooding.

The MWRD formed an Advisory Committee comprised of representatives from municipalities, government agencies, and nongovernmental organizations to evaluate and prepare the WMO. We believe that widespread implementation of the WMO will improve stormwater drainage and detention and will also protect wetlands and riparian areas. The WMO is also focused on reduction of soil erosion, which can damage properties and increase sediment in the waterways. The draft WMO incorporates comments received during the 2009 WMO public review period, results received from an Economic Impact Study, and input from the WMO Advisory Committee.

We encourage you to review this document and submit comments and questions to us. Numerous changes have been made to the WMO since the original public review period was held in 2009.

Thank you for your interest, and we look forward to receiving input by August 9, 2013.

Sincerely,



David St. Pierre

CO'C:JJM

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ARTICLE 1. AUTHORITY AND PURPOSE

§ 100. Statutory Authority

1. This **Ordinance** shall be known and may be cited as the Cook County Watershed Management Ordinance (**Ordinance**).
2. The Metropolitan Water Reclamation District of Greater Chicago (**District**) promulgates this **Ordinance** pursuant to its authority to adopt ordinances regulating sewers tributary to the **District's water reclamation plants**, regulating **floodplain** and **stormwater** management, and governing the location, width, course, and release rate of all **stormwater runoff** channels, streams, and basins in **Cook County**, over which the **District** has jurisdiction, in accordance with the adopted Cook County Stormwater Management Plan (**CCSMP**). The statutory authority for this **Ordinance** is contained in 55 ILCS 5/5-1062.1, 70 ILCS 2605/1 *et seq.*, and particularly 70 ILCS 2605/7f, 70 ILCS 2605/7h, 70 ILCS 2605/12, as well as other applicable authority, all as amended from time to time.
3. An **authorized municipality**, as defined in Article 14, may adopt this **Ordinance** pursuant to its authority to adopt ordinances regulating **floodplain** and **stormwater** management and governing the location, width, course, and release rate of all **stormwater runoff** channels, streams, and basins in the **authorized municipality**, over which the **authorized municipality** has jurisdiction. The statutory authority for an **authorized municipality** to adopt this **Ordinance** is contained in the Illinois Municipal Code, 65 ILCS 5/1 *et seq.*, as well as other applicable authority, all as amended from time to time.

§ 101. Cook County Stormwater Management Plan

The **District's Board of Commissioners** adopted the **CCSMP** on February 15, 2007. This **Ordinance** is a component of the countywide **stormwater** management program presented in the **CCSMP**. Other components of the countywide **stormwater** management program include the **development** of Detailed Watershed Plans (**DWPs**) for the major **watersheds** of **Cook County**. The **CCSMP** and **DWPs** are available on the **District's** website, www.mwrd.org.

§ 102. Considerations

The **District** has considered numerous factors in the creation of this **Ordinance** including but not limited to:

1. Inappropriate **floodplain** uses and **development** have increased **flood** risk, **flood** damage, and environmental degradation;

2. It is necessary to consider **stormwater** management on a **watershed** basis;
3. **Cook County** lands drain poorly due to generally flat topography and soils of low permeability;
4. Many land **development** practices alter the natural hydrologic balance of **Cook County** streams;
5. **Wetlands** play an essential role in **flood** storage, **floodplain** management, **sediment** control, and water quality enhancement;
6. **Riparian environments** are effective in reducing flow rates and volumes in addition to providing stream bank **erosion** protection and water quality enhancements;
7. Many **stormwater facilities** are not adequately maintained;
8. While the **District** has required **stormwater** detention in **separate sewer areas** since 1972 via the **Sewer Permit Ordinance**, **floodings** continues to be a concern in **Cook County** due to the increased volume and rate of **stormwater runoff** resulting from continued **development**;
9. **Stormwater** detention requirements for new **developments** alone do not address the impacts of transportation and other improvements; and
10. Infiltration and inflow contributes to **basement** backups, **sanitary sewer** overflows, and excessive flows to the **District's water reclamation facilities**.

§ 103. Purposes of this Ordinance

The purpose of this **Ordinance** is to effectuate the purposes and intent of the Metropolitan Water Reclamation District Act (70 ILCS 2605/1 *et seq.*) by:

1. Protecting the public health, safety, and welfare, and reducing the potential for loss of property due to **flood** damage;
2. Managing and mitigating the effects of urbanization on **stormwater** drainage throughout **Cook County**;
3. Protecting existing and new **development** by minimizing the increase of **stormwater runoff** volume beyond that experienced under existing conditions and by reducing peak **stormwater** flows;
4. Promoting responsible land use practices in **Cook County**, particularly within **floodplains** and **floodways**;

5. Protecting existing water resources, including **lakes**, streams, **floodplains**, **wetlands**, and **groundwater** from detrimental and unnecessary modification in order to maintain their beneficial functions;
6. Reducing or mitigating the environmentally detrimental effects of existing and future **runoff** in order to improve and maintain water quality;
7. Preserving and enhancing existing **riparian environments**;
8. Controlling **erosion** and the discharge of **sediment** from all sources including, but not limited to, **stormwater facilities**, **waterways**, **developments**, and construction **sites**;
9. Requiring appropriate and adequate provisions for **site runoff** control;
10. Requiring consistency in **stormwater** management activities within and among the units of government having **stormwater** management jurisdiction;
11. Ensuring future **development** in the **floodplain** does not adversely affect **floodplain** environments or increase the potential for **flood** damage;
12. Requiring regular, planned **maintenance** of **stormwater** management facilities;
13. Encouraging control of **stormwater** quantity and quality at the most **site-specific** or local level;
14. Establishing uniform and minimum countywide **stormwater** management regulations while recognizing and coordinating with **stormwater** programs effectively operating within **Cook County**;
15. Requiring strict compliance with and enforcement of this **Ordinance**;
16. Meeting the **floodway** permitting requirements of the Illinois Department of Natural Resources, Office of Water Resources, delineated in the Rivers, Lakes, and Streams Act (615 ILCS 5/18g);
17. Complying with the rules and regulations of the National Flood Insurance Program (**NFIP**) thereby making federally subsidized **flood** insurance available;
18. Protecting the ability of the **District's** sewerage systems, intercepting sewers, **TARP** structures, **sewage** disposal and treatment plants, works and facilities to perform the functions for which they were designed;
19. Controlling the nature, volume, and manner of discharge into the **District's** sewerage systems, intercepting sewers, **TARP** structures, **sewage** disposal and treatment plants, works, and facilities;

20. Maintaining stable operation of the **District's** sewerage systems, intercepting sewers, **TARP** structures, **sewage** disposal and treatment plants, works, and facilities;
21. Reducing infiltration and inflow into the **District's** sewerage systems, intercepting sewers, **TARP** structures, **sewage** disposal and treatment plants, works, and facilities; and
22. Protecting waters within **Cook County** so as to preserve the public health.

§ 104. Permits Existing Prior to the Effective Date of this Ordinance

1. Permittees / Co-permittees that have **Sewerage System Permits** issued prior to the effective date of this Watershed Management Ordinance will retain all rights, obligations and liabilities under the **Sewer Permit Ordinance** and the **Manual of Procedures**.
2. Effective [***Date Reserved***], the **Sewer Permit Ordinance** and its companion ordinance, the **Manual of Procedures**, are repealed. (See MWRDGC Ordinance repealing **Sewer Permit Ordinance** and MWRDGC Ordinance repealing the **Manual of Procedures** for Administration of the **Sewer Permit Ordinance**).
3. The requirements for **qualified sewer construction** are now contained in Article 7 of this **Ordinance**.

ARTICLE 2. APPLICABILITY AND GENERAL PROVISIONS

§ 200. Scope of Regulation

1. This **Ordinance** applies to all **development** within the boundaries of **Cook County**, Illinois and **qualified sewer construction** within the **District's** corporate boundaries or service agreement areas, over which the **District** has jurisdiction as described in §100.2, including those **developments** under the control of any governmental entity, agency, or authority.
2. Any **person** proposing a **development** that falls under any of the categories set forth in §201 shall obtain a **Watershed Management Permit** prior to **development**.
3. The requirements for sewer construction contained within Article 7 of this **Ordinance** supersede the requirements of the repealed **Sewer Permit Ordinance** and the **Manual of Procedures**, as described in §104. Any **person** proposing to install **qualified sewer construction** within the **District's** corporate limits or service agreement areas, as detailed under §700.5, shall obtain a **Watershed Management Permit** prior to commencing sewer work.
4. The provisions of this **Ordinance** shall not apply to any of the following:
 - A. **Structures** and land uses existing as of the effective date of this **Ordinance**, except when **redevelopment** occurs;
 - B. Proposed **development** with a **Sewerage Systems Permit** issued prior to the effective date of this **Ordinance** which has not been fully constructed by the effective date of this **Ordinance**. **Stormwater** management provisions for such **development** shall conform to the approved plans and specifications of the issued **Sewerage System Permit** and shall not result in any increase in **impervious area** over the amount specified by the **Sewerage System Permit**;
 - C. Proposed **development** for which a complete **Sewerage System Permit** application has been accepted by the **District** prior to the effective date of this **Ordinance**. Any such **Sewerage System Permit** application shall be subject to the **Sewer Permit Ordinance** effective at the time the application was made. A complete **Sewerage System Permit** application is considered accepted by the **District** upon actual receipt by the **District** and is minimally composed of the following:
 - (1) Complete and executed **Sewerage System Permit** forms consisting of Schedules A, B, C, and D where **stormwater** detention is required;
 - (2) **Sewerage System Permit** fee paid in full;

- (3) Plan drawings signed and sealed by a **Professional Engineer**; and
- (4) Permit documents signed by the **permittee** and **co-permittee**;
- D. **Development** within the corporate boundaries of the City of Chicago, Illinois except for any of the following:
 - (1) New or reconstructed sewers, drainage, or detention **outfalls** to the **waterways** or Lake Michigan;
 - (2) **Stormwater** discharges directly to **District** property; and
 - (3) Direct connections to **District** interceptors, **TARP structures**, facilities, or **District** property.
- E. **Development** activities listed in §201.1 that are within the corporate boundaries of a **multi county municipality**, which has adopted and currently enforces the **stormwater** ordinance of a **contiguously** adjacent Illinois county subject to the requirements of §207; or
- F. A **Development** included on the **District's existing development plans list**. The **existing development plans list** shall be subject to all of the following conditions:
 - (1) The **District** shall compile the **existing development plans list** before the effective date of this **Ordinance**;
 - (2) All **developments** included on the **existing development plans list** shall be subject to the provisions of the **Sewer Permit Ordinance** as it existed on **[date]**, and shall submit a permit application in conformance with the **Sewer Permit Ordinance**;
 - (3) A **development** must have received preliminary approval from the governing **municipality** to be included on the **existing development plans list**;
 - (4) A **development** shall be removed from the **existing development plans list** upon expiration of the governing **municipality's** preliminary approval; and
 - (5) The **existing development plans list** shall expire one year from the effective date of this **Ordinance**.
- 5. Existing **structures** that do not conform to the requirements of this **Ordinance** shall not be altered, replaced, or enlarged in any manner unless such alterations, replacements, or enlargements conform to the requirements of this **Ordinance**.

§ 201. Applicability

Table 1. Applicability Summary				
Activity		Regulated Area	Permitting Authority	See Section
Development Activities	Disturbances more than 0.5 acre*	Cook County Except City of Chicago	District or Authorized Municipality	§ 201.1.D
	New or reconstructed sewers, drainage, or detention outfalls to waterways or Lake Michigan	Cook County Including City of Chicago	District	§ 201.2.D
	Reconfiguration of existing major or minor stormwater systems which alters the service area of a permitted or existing detention facility	Cook County Except City of Chicago	District	§ 201.2.E
	Modifications to a permitted or existing detention facility	Cook County Except City of Chicago	District	§ 201.2.F
Flood Protection Areas	Development within a flood protection area	Cook County Except City of Chicago	District or Authorized Municipality	§ 201.1.A
	Indirect impacts to a wetland	Cook County Except City of Chicago	District or Authorized Municipality	§ 201.1.B
	Alteration of an existing building which constitutes a substantial improvement in the regulatory floodplain	Cook County Except City of Chicago	District or Authorized Municipality	§ 201.1.C
Qualified Sewer Construction	Sewers, drainage, or detention in combined sewer areas tributary to combined sewers	District Corporate Limits or Service Areas Except City of Chicago	District	§ 201.2.A
	Qualified sewer construction including lift stations	District Corporate Limits or Service Areas Except City of Chicago	District	§ 201.2.B
District Impacts	Direct connections to District interceptors, reservoirs, facilities, or Tunnel and Reservoir Plan Structures	Entire Cook County Including City of Chicago	District	§ 201.2.C
	Stormwater discharges directly to District Property	Entire Cook County Including City of Chicago	District	§ 201.2.G

*unless the **development** solely involves one or more activity listed in §201.1.D.

1. A **Watershed Management Permit** from either the **District** or an **authorized municipality** shall be required for any of the following **development** activities:
 - A. **Development** within a **Flood Protection Area**;
 - B. **Development** indirectly impacting a **wetland**;
 - C. **Development** altering an existing **building** which constitutes a **substantial improvement** in the **regulatory floodplain**; and
 - D. **Development** disturbing more than 0.5 acre, unless the **development** solely involves one or more of the following:
 - (1) Agriculture or gardening that maintains existing grades and drainage patterns;
 - (2) Installation, renovation, or replacement of a septic system, potable water service line, or other utility to serve an existing **structure**, provided that the area is restored to existing grade and vegetative cover is restored;
 - (3) Excavation in rights-of-way or public utility easements disturbing less than 0.5 acres for the purpose of installing or maintaining utilities other than **qualified sewer construction**, provided that the area is restored to existing grade and vegetative cover is restored. Utility excavation not requiring a **watershed management permit** must install and maintain adequate **sediment** and **erosion** control;
 - (4) **Maintenance activities**, repair, or at-grade in-kind replacement of existing lawn areas not otherwise requiring a **Watershed Management Permit**, provided that the area is restored to existing grade and vegetative cover is restored; or
 - (5) **Maintenance activities**, repair, or in-kind replacement of existing **impervious areas** including, but not limited to, roadways or parking lots not otherwise requiring a **Watershed Management Permit**.
2. A **Watershed Management Permit** from the **District** shall be required for any of the following **development** activities:
 - A. **Development** proposing sewers, drainage, or detention in **combined sewer areas** tributary to either a **combined sewer** or a **waterway**;
 - B. **Permittees** or **co-permittees** proposing **qualified sewer construction** within the **District's** corporate boundaries;

- C. **Development** proposing a direct connection to **District** interceptors, reservoirs, facilities, or **TARP structures**;
- D. **Development** proposing new or reconstructed sewer, drainage, or detention **outfalls** to the **waterways** or Lake Michigan, within **Cook County**;
- E. **Development** proposing reconfiguration of existing **major** or **minor stormwater systems** which alters the service area of a permitted or existing **detention facility**;
- F. **Development** proposing modifications to a permitted or **existing detention facility**;
- G. **Development** discharging **stormwater** directly to **District** property; and
- H. **Non-residential development** on septic systems or private treatment systems proposing a connection to a **sanitary sewer**.

§ 202. Interpretation

1. This **Ordinance** shall be liberally construed to protect the health, welfare, safety, and the environment of the residents of **Cook County** and to effectuate the purposes of this **Ordinance** and enabling legislation.
2. Nothing contained in this **Ordinance** shall be understood to imply consent, licensing, or permission to locate, construct, or maintain any **structure, site**, or facility, nor to carry on any trade, industry, occupation, operation, or activity.
3. When provisions of this **Ordinance** differ or conflict with any other applicable statute, law, ordinance, regulation, or rule, the more stringent provisions shall apply.
4. The provisions of this **Ordinance** are cumulative and shall be considered additional limitations on all other laws and ordinances previously approved, or that may hereafter be approved, and that concern any subject matter included in this **Ordinance**.

§ 203. Disclaimer of Liability

1. The degree of **flood** protection provided by this **Ordinance** is considered reasonable for regulatory purposes and is based on engineering experience and scientific methods of study.
2. This **Ordinance** does not warrant that areas outside the delineated **floodplain** or permitted **developments** within the delineated **floodplain** will be free from **flooding** and associated damages.

3. This **Ordinance** shall not be construed or applied in any manner to create liability on the part of, or a cause of action against, the **District**, any **municipality**, or any elected official, officer, agent, or employee thereof, for any damage or injury to **person** or property resulting from reliance on the provisions of this **Ordinance** or from reading or interpreting any map that is part of this **Ordinance**.
4. The design and supplementary design requirements contained herein do not replace nor substitute sound engineering practice.

§ 204. Severability

1. The provisions of this **Ordinance** shall be severable in accordance with the following rules:
 - A. If any court of competent jurisdiction shall adjudge any provision of this **Ordinance** invalid, such judgment shall not affect any other provisions of this **Ordinance**; and
 - B. If any court of competent jurisdiction shall adjudge invalid the application of any provision of this **Ordinance** to a particular **parcel** of land, a particular **structure**, or a particular **development**, such judgment shall not affect the application of said provisions to any other **parcel** of land, **structure**, or **development**.
2. All such unaffected provisions of this **Ordinance** shall remain in full force and effect.

§ 205. Right of Access

1. Representatives of the **District** may, at all reasonable times, enter upon any **development** subject to this **Ordinance** for the purpose of conducting periodic inspections to ensure compliance with this **Ordinance** or with a **Watershed Management Permit** issued thereunder. The scope of the inspection, including reviewing and copying of records, is limited to determining whether the **development** is in compliance with all requirements and conditions of this **Ordinance** and/or **Watershed Management Permit**.
2. The **District** may periodically inspect any mitigation measure at reasonable times and such inspection shall be limited to determining whether the **development** is in compliance with all requirements and conditions of this **Ordinance** and/or a **Watershed Management Permit**.
3. An inspection may also be conducted in accordance with Article 12, § 1201.4 of this **Ordinance**.

§ 206. National Flood Insurance Program Eligibility

1. This **Ordinance** does not repeal any municipal ordinance or resolution passed in order to establish eligibility for the National Flood Insurance Program (**NFIP**).
2. This **Ordinance** is not intended to supplement, replace, or remove any responsibility that a **municipality** may have to maintain eligibility and good standing in the **NFIP**. Proper administration and enforcement of the **NFIP** within participating municipalities is a requirement of the **NFIP**.
3. **Floodplain** requirements included in Article 6 meet or exceed the **NFIP** requirements for **development** as set forth under the Code of Federal Regulations (44 C.F.R §§ 59-60).

§ 207. Multi County Municipalities

1. A **multi county municipality** may adopt and enforce one of the following ordinances of an adjacent county if the **municipality** has corporate area within that county:
 - A. The DuPage County Countywide Stormwater and Flood Plain Ordinance, as revised from time to time by the DuPage County Board;
 - B. The Kane County Stormwater Ordinance, as amended from time to time by the Kane County Board;
 - C. The Lake County Watershed Development Ordinance, as amended from time to time by the Lake County Board;
 - D. The McHenry County Stormwater Management Ordinance, as amended from time to time by the McHenry County Board; or
 - E. The Will County Stormwater Management Ordinance, as amended from time to time by the Will County Board.
2. A **Watershed Management Permit** shall not be required from the **District** for any **development** activity specified in §201.1 within a **multi county municipality**, which elects to adopt an adjacent county's ordinance as specified in §207.1 and satisfies all of the following requirements:
 - A. Has the authority to adopt an adjacent county's ordinance;
 - B. Retains qualified staff per the adopted ordinance;
 - C. Enters into an intergovernmental agreement with the **District**;

- D. Does not have any **combined sewer areas** within its corporate boundaries; and
 - E. Administers and enforces the adopted ordinance per the requirements of the adopted ordinance.
3. A **Watershed Management Permit** shall be required from the **District** for all **development** activities specified in §201.1 and §201.2 within a **multi county municipality** that does not:
- A. Adopt and enforce an ordinance specified in §207.1; or
 - B. Comply with the requirements specified in §207.2.
4. A **Watershed Management Permit** shall be required from the **District** for all **development** activities specified in §201.2 within a **multi county municipality**, regardless of whether a **multi county municipality** adopts and enforces an adjacent county's ordinance.

§ 208. Amendments

Amendments to this **Ordinance** shall become effective when adopted by the **District's Board of Commissioners**.

§ 209. Effective Date

This **Ordinance** shall be effective 180 calendar days after adopted by the **District's Board of Commissioners**. The effective date of this **Ordinance** is _____.

ARTICLE 3. WATERSHED MANAGEMENT PERMIT REQUIREMENTS AND SUBMITTALS

§ 300. General Requirements

1. The **District** shall establish separate permit fees by ordinance. Fees shall be based upon the costs the **District** incurs for all aspects of the permitting process, including inspections.
2. The **watershed management permit** submittal shall include an opinion by a **Professional Engineer** that the technical submittal meets the criteria required by this **Ordinance**. In addition:
 - A. The **site stormwater** plan shall include the signature and seal of a **Professional Engineer**;
 - B. The design of **stormwater facilities**, calculations for the determination of the 100-year **floodplain** and **regulatory floodplain**, and calculations of the impact of **development** shall meet the standards of this **Ordinance** and shall be prepared, signed, and sealed by a **Professional Engineer**;
 - C. If **wetlands** are located on the **site** or within 100 feet of the **site**, a survey locating the **wetland** in plan view, including the **wetland buffer** in accordance with §603, shall be signed and sealed by a **Professional Engineer** or a **Professional Land Surveyor**; and
 - D. If **riparian environments**, in accordance with §606, are located on the **site** or within 100 feet of the **site**, a survey in plan view of the channel or stream and associated **riparian environment** shall be signed and sealed by a **Professional Engineer** or a **Professional Land Surveyor**.
3. All required topographic information shall be tied to the North American Vertical Datum of 1988 based on national map standard accuracy.
4. Prior to commencing construction, the **co-permittee** shall secure all appropriate approvals from federal, state, and regional authorities or their designee, including, but not limited to, **OWR**, the **Corps**, **IEPA**, and **FEMA**.
5. **Co-permittees** proposing point discharge at a location adjacent to holdings or property of Forest Preserve District of **Cook County** (FPD) shall contact FPD and review FPD's **Stormwater** Management Policy.
6. Either the **District** or relevant **authorized municipality** shall make the final

determination that all pertinent information is submitted by the **co-permittee** to allow for **watershed management permit** review and/or issuance. Additional information or calculations may be requested from the **co-permittee** by either the **District** or **authorized municipality** to ensure compliance with this **Ordinance**.

§ 301. Watershed Management Permit Application and Submittals

The **watershed management permit** application and submittal shall include all of the following when applicable:

1. The name(s) and legal address(es) of the **co-permittee(s)**, **permittee**, and of the **owner(s)** of the land;
2. The common address and legal description of the **site** where the **development** will take place;
3. A general narrative description of the proposed **development** that shall include:
 - A. Type of **development**;
 - B. Total **parcel** or **site** size; and
 - C. Size of area under **development**;
4. Affidavit(s) signed by the **co-permittee(s)** attesting to the understanding of the requirements of and intent to comply with this **Ordinance**;
5. A statement of opinion by either a **Professional Engineer** or **Wetland Specialist** either denying or acknowledging the presence of **flood protection areas**:
 - A. Within the area of the **development**;
 - B. On the **site**;
 - C. 100 feet beyond the area of the **development** if not included within the **site**; and
 - D. The appropriate submittals identified in this article if the statement acknowledges the presence of **flood protection areas**;
6. Copies of other permits or permit applications as required, including any **FEMA LOMAs, LOMRs, LOMR-Fs, CLOMAs, and CLOMRs**;
7. The **Erosion** and **Sediment** Control Submittal specified in §302 for any **development** requiring a **watershed management permit**;

8. The **Stormwater** Management Submittal specified in §303 for any **development** requiring a **watershed management permit**;
9. The **Floodplain** Submittal specified in §304 for **development** associated with a **floodplain** designated in §601;
10. The **Wetland** Submittal specified in §305 for any **development** associated with a **wetland** designated in §603;
11. The Riparian Submittal specified in §306 for any **development** associated with a **riparian environment** designated in §606;
12. The Sewer Construction Submittal specified in §306.7 for any **development** associated with **qualifying sewer construction** designated in Article 7;
13. All applicable maps specified in §308.1; and
14. **Maintenance** and Monitoring Plan Submittal specified in §310.

§ 302. Erosion and Sediment Control Submittal

The **Erosion** and **Sediment** Control Submittal shall require the following when applicable:

1. Maps, exhibits, and plan sheet(s) in accordance with §308.4;
2. An **erosion** and **sediment** control plan that describes all measures appropriate for the **development** such that all the requirements of Article 4 are met. This plan shall include:
 - A. A narrative description of the existing land cover, hydrologic conditions of the proposed **development** and areas adjacent to the **development** including a description of any **flood protection areas**, **site** discharge location(s), points of discharge to **Jurisdictional Waters of the U.S.**, and soil survey data;
 - B. The **NPDES** ILR-10 permit number issued by **IEPA** to the **co-permittee** upon submittal of the ILR-10 Notice of Intent permit application or permit;
 - C. A narrative description of the proposed temporary **erosion and sediment control practices**, including a narrative describing how **flood protection areas** will be protected from **erosion** and **sedimentation**;
 - D. A schedule of construction activities including, but not limited to, clearing and grading, installation of **stabilized** construction entrances, disposal of construction waste, stockpiling, and inspection and **maintenance** of all **erosion**

and sediment control practices;

- E. A narrative describing how **flood protection areas** will be protected from **erosion** and **sedimentation**;
- F. Data and calculations used to size, locate, design, and maintain all **erosion and sediment control practices**, and the design of temporary stream crossings; and
- G. A mechanism for ensuring that the **erosion** and **sediment** control installation and **maintenance** requirements for both temporary and permanent measures will be met, including the list of **maintenance** tasks and performance schedules that have been identified and/or required in the plan sheet(s) and specifications.

§ 303. Stormwater Management Submittal

The **Stormwater** Management Submittal shall require the following when applicable:

- 1. Maps, exhibits, and plan sheet(s) in accordance with §308.1, §308.2, §308.3, and §308.5;
- 2. The **site runoff** plan for the **development** that describes all appropriate measures necessary to meet the requirements of §502. This plan shall include:
 - A. A narrative description of the existing drainage pattern that shall include:
 - (1) The portion of the **parcel(s)** that is located in a **separate sewer area**;
 - (2) The portion of the **parcel(s)** that is located in a **combined sewer area**;
 - (3) The **parcel(s)** and **site** discharge point(s) to a **storm sewer** or **waterway**; and
 - (4) The **parcel(s)** and **site** discharge point(s) to a **combined sewer**;
 - B. A narrative description of the proposed **development** that shall include:
 - (1) Area in acres of existing **impervious areas**; and
 - (2) Area in acres of proposed **impervious areas**;
 - C. A narrative description of the upstream **tributary area** to allow for evaluation of off-site impacts resulting from the proposed **development**;

- D. **Stormwater** calculations comprised of **site runoff** and upstream tributary **runoff** calculations. Such **stormwater** calculations must include the following as applicable:
 - (1) Documentation identifying the procedures, assumptions, and data used to calculate hydrologic and hydraulic conditions for sizing both **major and minor stormwater systems**;
 - (2) Time of concentration calculations as required in Article 5;
 - (3) Curve number calculations for existing and proposed conditions;
 - (4) Calculations for sizing **storm sewer** systems;
 - (5) Delineation of areas tributary to each **stormwater facility**, overland flow route, and storage facility;
 - (6) Hydraulic grade line and water surface elevations under both design flow and **base flood** conditions;
 - (7) Calculations for sizing overland flow routes, ditches, channels, and swales;
 - (8) Cross section data for open channels;
 - (9) Profile drawings for open channels and sewers;
 - (10) Assumptions or calculations utilized to determine tailwater conditions for the **site**; and
 - (11) Other calculations necessary to demonstrate compliance with this **Ordinance**;
 - E. Determination of the **BFE** and **FPE**, including the source of the determination, in accordance with §601.
3. A volume control plan that describes all measures appropriate for the **development** in accordance with §503. This plan shall include:
- A. Calculations of **impervious area** and the associated volume required for the **volume control practices**;
 - B. Narrative description of likely water quality impacts based upon proposed **development** land use;

- C. Description of soils that shall include:
 - (1) Infiltration rates;
 - (2) Percentage of clay; and
 - (3) Depth to water table, bedrock, or limiting layer.
 - D. Narrative description of the utilization of the **volume control practices** hierarchy in §503.3, including use of **retention-based practices** and **flow-through practices** in §503.3, and for **impervious area** reduction in §503.3.C;
 - E. Calculations of the quantifiable storage provided in each proposed **retention-based practice(s)** in §503.3 to verify adequate storage;
 - F. Calculations to demonstrate that the chosen **flow-through practice(s)** in §503.3 will treat the targeted water quality impacts; and
 - G. Calculation of **impervious area** reduction in §503.3, if applicable.
4. A **detention facility** plan that describes all measures appropriate for the **development** in accordance with §504. This plan shall include:
- A. Documentation identifying the procedures, assumptions, and data used to calculate hydrologic and hydraulic conditions and to determine the post-**development allowable release rate** and related storage volume;
 - B. Elevation versus storage area curve and associated calculations for **detention facility**;
 - C. Elevation versus discharge curve and associated calculations for the outlet works of the storage system;
 - D. Calculations demonstrating that the overflow **structure** and overflow path are sized in accordance with §504.11(C); and
 - E. Assumptions or calculations utilized to determine tailwater conditions for the **site** in accordance with §504.13(B).

§ 304. Floodplain Submittal

The **Floodplain** Submittal shall describe all measures appropriate for the **development** in accordance with Article 6. This submittal shall include the following when applicable:

1. Maps, exhibits, and plan sheet(s) in accordance with §308.5;
2. A determination of the **BFE**, including the source of the determination, in accordance with §601.4;
3. A determination of the **FPE**, including the source of the determination, in accordance with §601.9;
4. A narrative description of proposed **development** within the limits of the **regulatory floodplain** and **regulatory floodway**;
5. A determination from the **permittee** if **development** is a **substantial improvement**;
6. A narrative discussion and details of **floodproofing** measures including material specifications, construction methods, and calculations;
7. **Floodplain** fill and **compensatory storage** calculations in accordance with §602.9, §602.10, and §602.11 that shall include:
 - A. Cross section profiles of the **floodplain** fill and **compensatory storage**;
 - B. A plan view delineating the location of cross sections; and
 - C. Tabular summary showing fill below and above the existing 10-year **flood** elevation and cuts below and above the proposed 10-year **flood** elevation;
8. Revisions to **FIRM(s)** including all hydrologic and hydraulic calculations, modeling, and all **CLOMR/LOMR** applications;
9. A copy of the **Cook County FIS Floodway** Data Table; and
10. For **development** in the **regulatory floodway**, the following calculations or analyses shall be submitted to demonstrate compliance with §602.26:
 - A. Existing and proposed hydrologic and hydraulic analysis (land use and stream systems);
 - B. Tabular summary of existing and proposed flows, **flood** elevations, and **floodway** velocities for the 2-year, 10-year, and 100-year **storm event**;

- C. All calculations used in hydrologic and hydraulic modeling;
 - D. Input and output for hydraulic and hydrologic computer models;
 - E. Plan view drawing locating all cross sections utilized within the hydraulic and hydrologic computer models;
 - F. **Flood** damage analyses for the replacement or modification of existing culverts, bridges, or impoundments;
 - G. Hydraulic analyses of new, modified, or replacement bridges or culverts;
 - H. Analyses of alternative transition sections as required in §602.28; and
 - I. Analyses of hydrologically and **hydraulically equivalent compensatory storage**; and
11. Copies of any of the following forms of correspondence from the **OWR**:
- A. A letter of no objection stating that no **OWR** permit is necessary; or
 - B. A copy of the completed joint application form (NCR Form 426, "Protecting Illinois Waters"), signed by the **co-permittee**, and all associated correspondence submitted to and received from **OWR**.

§ 305. Wetland Submittal

The **Wetland** Submittal shall describe all measures appropriate for the **development** in accordance with Article 6. This submittal shall include the following when applicable:

- 1. Maps, exhibits, and plan sheet(s) in accordance with §308.7;
- 2. The **isolated wetland submittal** for a **standard isolated wetland** that includes **contiguous isolated waters** less than one-tenth of an acre (0.10 acres) in aggregate shall include the following:
 - A. An **isolated wetland** delineation report containing the following:
 - (1) A delineation of the **wetlands** consistent with the requirements for **wetland** delineation provided in §603;
 - (2) A statement indicating date of boundary verification by the **District**;
 - (3) All **Corps** "Routine Wetland Determination Data Form(s);" and

- (4) Mapping products in accordance with §308;
- B. Copies of the following forms of correspondence from the **Corps**:
 - (1) A **jurisdictional determination** from the **Corps** indicating that the impacted **wetland** is not under the jurisdiction of the **Corps**; or
 - (2) A Letter of No Objection stating that no permit from the **Corps** is necessary; and
 - (3) If required by the **Corps**, a 404 permit application, all associated correspondence, and a copy of the completed joint application form (NCR Form 426, "Protecting Illinois Waters") signed by the **co-permittee**;
- 3. The **isolated wetland submittal** for a **high quality isolated wetland** or a **standard isolated wetland** equal to or greater than one-tenth of an acre (0.10 acres) in aggregate shall contain the following:
 - A. An **isolated wetland** delineation report containing the following:
 - (1) A narrative describing the location, type, functions, and size of all **wetlands** and **wetland buffers** on the **site**;
 - (2) A statement indicating date of boundary verification by the **District**;
 - (3) A delineation of the **isolated wetlands** consistent with the requirements for **wetland** delineation provided in §603;
 - (4) A classification of each on-site **isolated wetland** as either a **high quality isolated wetland** or a **standard isolated wetland**, including a narrative detailing the results of the assessment of specific functions and values;
 - (5) All **Corps** "Routine Wetland Determination Data Form(s);"
 - (6) An assessment to determine the **Swink and Wilhelm Floristic Quality Index (FQI)** and **mean coefficient of conservatism (Ĉ)**, carried out within the growing season for all **wetlands** on the **site**;
 - (7) Photos of all **wetlands** and **wetland buffers** on the **site**;
 - (8) An Illinois Department of Natural Resources (IDNR) threatened and endangered species consultation;
 - (9) A United States Fish and Wildlife Service (USFWS) threatened and endangered species consultation; and

- (10) Mapping products in accordance with §308;
- B. Copies of the following forms of correspondence from the **Corps**:
 - (1) A **jurisdictional determination** from the **Corps** indicating that the impacted **wetland** is not under the jurisdiction of the **Corps**; or
 - (2) A Letter of No Objection stating that no permit from the **Corps** is necessary; and
 - (3) If required by the **Corps**, a 404 permit application, all associated correspondence, and a copy of the completed joint application form (NCR Form 426, "Protecting Illinois Waters") signed by the **co-permittee**;
- C. For impacts to **high quality isolated wetlands**, documentation must be provided indicating that the proposed amount of impact represents the least amount of impact required to allow for an economically feasible use of the **parcel**, and documentation shall be provided indicating that:
 - (1) The presence of **high quality isolated wetlands** precludes all economically feasible uses of the **site** and no practicable alternative to **wetland** modification exists; and/or
 - (2) Avoidance of **high quality isolated wetlands** would create a hazardous road condition and no practicable alternative to **wetland** modification exists;
- D. For impacts to **standard isolated wetlands** with a total acreage greater than or equal to one-tenth of an acre (0.10 acres) in aggregate, documentation must be provided indicating that no practicable alternative to **wetland** modification exists;
- E. An evaluation of the indirect impacts to **isolated wetlands** on the **site** and **wetlands** 100 feet beyond the area of the **development** if not included within the **site**;
- F. For impacts to **isolated wetland buffers**, documentation must be provided that describes how the impacted buffer functions and how its values will be mitigated. **Isolated wetland buffer** impacts may be mitigated via replacement or enhancement of impacted functions and values, or through buffer averaging;
- G. If mitigation is required, a **wetland mitigation** document must be developed in accordance with §310.3 and a plan in accordance with §308.7; and

- H. If mitigation is to be provided via a **wetland mitigation bank**, a statement of obligation from the **wetland mitigation bank** showing mitigation acreage reserved for the project; and
- 4. Prior to construction, the **co-permittee** shall submit all relevant federal, state, and local permits;

§ 306. Riparian Environment Submittal

The **Riparian Environment** Submittal shall describe all measures appropriate for the **development** in accordance with Article 6. This submittal shall include the following when applicable:

- 1. Maps, exhibits, and plan sheet(s) in accordance with §308.8;
- 2. An inventory of the functions of the **riparian environments** in accordance with §606.1;
- 3. A delineation of the **riparian environments** in accordance with §606.2;
- 4. For impacts to **riparian environments**, documentation must be provided that describes the impacted riparian functions and how their values will be mitigated. **Riparian environments** impacts may be mitigated via replacement or enhancement of impacted functions;
- 5. For impacts to a **Jurisdictional Waters of the U.S.**, provide copies of any of the following forms of correspondence from the **Corps**:
 - A. A **Jurisdictional Determination** from the **Corps** indicating that the impacted waters are isolated;
 - B. A Letter of No Objection stating that no permit is necessary; or
 - C. A Section 404 permit application from the **Corps**, all associated correspondence and a copy of the completed joint application form (NCR Form 426, "Protecting Illinois Waters") signed by the **co-permittee** or agent;
- 6. For channel relocation, include documentation indicating that the length of the mitigated channel is equal to or greater than the length of the disturbed channel; and
- 7. If mitigation is required, a **riparian environment** mitigation document must be developed in accordance with §310.5 and a plan in accordance with §308.8.

§ 307. Sewer Construction Submittal

The Sewer Construction Submittal shall describe and delineate all measures appropriate for installing **qualified sewer construction** in accordance with Article 7. This submittal shall include the following when applicable:

1. Maps, exhibits, and plan sheet(s) in accordance with § 308.6;
2. All **District** required general notes, approved material and applicable standard **qualified sewer construction** details available from the **TGM**;
3. All applicable **District** details, technical requirements, and design guidelines for **qualified sewer construction** available from the **TGM**;
4. Population Equivalency (PE) calculations for expected sewer flows based on new or expanded **development**;
5. Service area and future service area exhibits along with supporting population calculations;
6. A narrative description of any live sewer connection or live sewer bypass protocol;
7. Characteristic of Waste for On-site Treatment or Pre-treatment of **Industrial Wastes** including:
 - A. Completed Permit forms Schedule F & G; and
 - B. Narrative of wastes being generated, treatment process, and flow loading;
8. **District** Direct Connection information, including:
 - A. Completed Permit form Schedule (**RESERVED**);
 - B. Clearly label all **District** owned sewers and **structures** on the plans;
 - C. Provide clearance distances for all proposed excavation within 15 feet of **District** sewers and **structures**;
 - D. Provide sewer construction notes associated with construction in proximity of **District** facilities (available from the **TGM**);
 - E. Provide required **District** direct connection detail (available from the **TGM**);
 - F. Narrative of excavation protocol in proximity to **District structure**; and

- G. Provide shoring calculations certified by a structural engineer for any deep excavation in proximity of **District** facilities;
- 9. **Outfall** Connection details including:
 - A. Completed Permit form Schedule (RESERVED);
 - B. Clearly label proposed **outfall** location on the plans;
 - C. Provide **District outfall** general notes (available from **TGM**);
 - D. Provide construction details for the proposed **outfall**; and
 - E. Provide construction details of **stormwater** quality interceptor; and
- 10. Other calculation necessary to demonstrate compliance with this **Ordinance**.

§ 308. Maps, Exhibits and Plan Sheets Submittal

Depending on the complexity of the proposed **development** combining plan sheets is desirable if information provided on all plan sheets is clear, specific, and legible. The Maps, Exhibits, and Plan Sheets Submittal shall include the following when applicable:

- 1. Mapping products, with the project location indicated, shall include where applicable and where available:
 - A. Location map to scale displaying the route of storm drainage from the **development** to the receiving **waterway** or **combined sewer**;
 - B. Location map to scale displaying the route of sanitary flow from the **development** through the local sewer system to the receiving **District** interceptor or facility;
 - C. United States Geological Survey (USGS) topographic map;
 - D. Natural Resources Conservation Service (**NRCS**) soils map noting hydric soils;
 - E. **Cook County FIRM**;
 - F. **DWP inundation map**;
 - G. **National Wetland Inventory (NWI)**;
 - H. Aerial photo of the **site**;

- I. Aerial photo showing on-site **wetland** and off-site **wetland** boundaries and locations of delineation data points; and
- J. Historical aerial photographs, USGS hydrological atlas, or **NRCS wetland** inventory maps;
2. Plan sheet(s) and exhibits that shall contain the following:
 - A. North arrow;
 - B. Scale of at least one inch to 100 feet or less (e.g., one inch to 50 feet);
 - C. Legend;
 - D. Property and/or **parcel** lines; and
 - E. Date of original preparation and any revisions;
3. A **drainage area** exhibit that shall include:
 - A. A vicinity topographic map covering the entire upstream **watershed** that drains to or through the **site** and the entire **watershed** downstream to the point of known or assumed discharge and water surface elevation on the **site**;
 - B. Top of foundation elevations and overland flow paths on properties located directly downstream of and adjacent to the proposed **site**; and
 - C. A plan view drawing of existing and proposed **stormwater facilities** at the same scale as the vicinity topographic map that shall include:
 - (1) **Watershed** boundaries for areas draining through or from the **development**;
 - (2) The location of the **development** within the **watershed planning area**; and
 - (3) Soil types, vegetation, and land cover conditions affecting **runoff** upstream of the **development site** for any area draining through or to the **site**;
4. An **erosion** and **sediment** control plan sheet(s) at the same scale as the **stormwater** management plan sheet(s) that shall include:
 - A. Existing contours with drainage patterns and clearly delineated **watershed** boundaries tributary to the **site**;

- B. Location of **flood protection areas** and vegetated areas for the **development** that are to be preserved or avoided;
 - C. Proposed contours, locations of **waterways**, and the location of **erosion and sediment control practices**;
 - D. The **drainage area** tributary to each **erosion and sediment control practice** delineated on the drawing;
 - E. A schedule of construction activities including, but not limited to, clearing and grading of the **site**, installation of **stabilized** construction entrances, disposal of construction waste, stockpiling, and **maintenance** of all **erosion and sediment control practices**;
 - F. Design details for proposed **erosion and sediment control practices**; and
 - G. Identification of **person(s)** having legal responsibility for installation, **maintenance**, and removal of **erosion and sediment control practices** during construction and after **development** is completed;
5. The **stormwater** management plan sheet(s) shall include the following:
- A. An existing conditions plan sheet(s) that shall contain the following:
 - (1) Benchmark location and information;
 - (2) A delineation of any pre-development **regulatory floodplain** and **regulatory floodway** on the **site**;
 - (3) A **wetland** delineation of all **jurisdictional waters of the U.S.**, including **wetlands**, both on the **site** and extending one-hundred (100) feet beyond the **site**;
 - (4) A delineation of any **riparian environments** on the **site**;
 - (5) Existing contours to be disturbed during **development** on entire **site** and 50 feet beyond the **site**;
 - (6) Minimum contour interval of one foot with accuracy equal to one half of a foot (0.5 foot) of elevation;
 - (7) Top of foundation, **lowest floor**, **lowest entry elevation**, and **floodproofing** elevations of all existing **structures** within 100 feet of the **development** area;

- (8) Existing **structures**, parking lots, driveways, sidewalks, pathways, trails, and other **impervious areas** on the **site**;
 - (9) All existing **stormwater facilities** including pipes, field tile, culverts, and inlets on entire **site** and 50 feet beyond the **site**. Information regarding the invert and rim elevations, pipe sizes, pipe lengths, and material type shall be provided;
 - (10) Existing utilities including sanitary, storm, water main, or any other utilities that exist on the **site**. Information regarding the invert and rim elevations, pipe sizes, pipe lengths, and material type shall be provided; and
 - (11) Existing trees and vegetation areas on the **site**;
- B. A utility and geometry plan sheet(s) shall contain the following:
- (1) Delineated limits of any **flood protection areas** on the **site**;
 - (2) The **FPE(s)** shall be specified, as appropriate;
 - (3) All existing and proposed impervious surfaces such as roadways, **structures**, parking lots, driveways, sidewalks, pathways, trails, or any other impervious surfaces;
 - (4) All top of foundation elevations for existing and proposed **structures**;
 - (5) All existing and proposed **lowest entry elevations** of any **structures** within a **regulatory floodplain** on the **site** or on adjacent property;
 - (6) All existing and proposed **lowest entry elevations** of any **structures** adjacent to a **stormwater facility**;
 - (7) All existing and proposed **stormwater facilities** including pipes, field tile, culverts, and inlets, including rim and invert elevations, pipe sizes, pipe lengths, and material type;
 - (8) Existing and proposed utilities including sanitary, storm, water main, electric, television cables, gas or any others that exist on the **site**. Information regarding the invert and rim elevations, pipe sizes, pipe lengths, and material type should be provided;
 - (9) Design details for all proposed **stormwater facilities** including, but not limited to, **major and minor stormwater systems**, storage basins, **detention facilities**, **volume control practices** and **water quality control**

practices, and outlet works including restrictor size and invert;

- (10) Delineated limits of the **base flood** condition from new or adjacent **detention facilities**;
- (11) Location of all **volume control practices** and **water quality control practices**;
- (12) Downspout and sump pump discharge line locations and directions. Outlets should be outside the limits of **flood protection areas**; and
- (13) Location and limits of all easements;

C. A grading plan sheet(s) that shall contain the following:

- (1) Delineated limits of any **flood protection areas** on the **site**;
- (2) Existing and proposed contours of the entire **site** and 100 feet beyond the **site**;
- (3) Existing and proposed spot elevations demonstrating drainage patterns;
- (4) **Major and minor stormwater systems** that shall include:
 - (a) All existing and proposed **stormwater** facilities;
 - (b) All existing and proposed **volume control practices**;
 - (c) All existing and proposed **base flood** conditions for the **major stormwater system**;
 - (d) All existing and proposed overland flow routes;
 - (e) Stage-storage-discharge table for **detention facilities**;
 - (f) Design details for proposed **stormwater** facilities including, but not limited to, major and **minor stormwater systems**, storage basins, **volume and water quality control practices**, and outlet works including restrictor size and invert; and
 - (g) **Drainage area** to all proposed **stormwater facilities**;
- (5) A delineation of the pre-development and post-development **regulatory floodplain** and **regulatory floodway** in accordance with §601;

- (6) Topographic survey drawings of all existing and proposed **structures** located on or within 100 feet of the **site** including the **lowest floor, lowest entry elevation**, and **floodproofing** elevations;
 - (7) Plan view of locations of cross sections utilized to compute **compensatory storage**; in addition, the cross sections should be plotted on the plans or in the **stormwater** management submittal at a scale such that the reviewer can verify quantities;
 - (8) Location of cross sections and any other hydrologic or hydraulic computer-modeled features;
 - (9) **Volume control practices**; if native plantings are required this shall be shown on a separate planting plan;
 - (10) Delineation of all **unrestricted areas**;
 - (11) Delineation of all **native planting conservation areas**; and
 - (12) Delineation of all **disturbed areas**;
6. The utility plan sheet(s) for **qualified sewer construction** shall include the following:
- A. A utility plan sheet(s) shall contain the following:
- (1) Benchmark location and information;
 - (2) Existing **structures**, parking lots, driveways, sidewalks, pathways, trails, and other **impervious areas** on the **site**;
 - (3) All top of foundation elevations for existing and proposed **structures**;
 - (4) All proposed **qualified sewer construction** information including:
 - (a) **Qualified sewer** manhole, cleanout or other **structure** information including rim, and invert elevation (each labeled by compass direction), with a unique clearly labeled identifier;
 - (b) **Qualified sewer** pipe size, length, material, and slope, clearly labeled as proposed;
 - (c) At the upstream **building** connection, estimated sewer invert;
 - (d) At the downstream point of connection, estimated invert, size, slope, and flow direction of the existing sewer;

- (e) Utility crossing information, including pipe-to-pipe clearance distance, for all water main and water service intersections along the proposed alignment; and
 - (f) **Qualified sewer** manhole, **structure** lid cover type where appropriate (within HWL or **BFE**);
- (5) All existing sanitary and **combined sewer** pipe and **structure** information including pipes size, invert and rim elevation, flow direction, and material type;
 - (6) All existing sanitary and **combined sewer** pipe and **structure** to be demolished or abandoned, including septic systems;
 - (7) All existing and proposed water main and water service rim and invert elevations, and the location of all fire hydrants and valves;
 - (8) Existing and proposed utilities including, electric, television cables, gas or any others that exist on the **site**. Information regarding the invert and rim elevations, pipe sizes should be provided;
 - (9) All existing and proposed **stormwater facilities** including pipes, field tile, culverts, and inlets, including rim and invert elevations, pipe sizes, pipe lengths, and material type;
 - (10) Location of all **volume control practices** and **major stormwater systems**;
 - (11) All proposed and existing downspout and sump pump discharge line locations and directions. Outlets should be outside the limits of **flood protection areas**;
 - (12) Delineated limits of any **flood protection areas** on the **site**;
 - (13) The **BFE** and **FPE(s)** shall be specified in accordance with §601, as appropriate;
 - (14) Location and limits of all easements; and
 - (15) Existing trees and vegetation areas along the alignment;
- B. The plan and profile for public **qualified sewer** main **construction** shall include the following (when applicable):
- (1) Profile views or all proposed public **qualified sewer** main **construction** depicted on the same sheet as an accompanying plan view;

- (2) Profiles shall follow the alignment of **public qualified sewer main construction** if substantially different from the centerline of a **right-of-way** alignment;
 - (3) Proposed size, **length, slope, material and class of** pipe for all proposed public **qualified sewer main construction**;
 - (4) A unique line type to distinguish between proposed and existing sewer systems;
 - (5) **Structure** rim and invert elevations (labeled by compass direction) for all proposed **qualified sewer construction** along with a unique identifier;
 - (6) Horizontal and vertical scale [exaggeration as appropriate to show detail];
 - (7) Utility crossings with vertical distance between proposed **qualified sewer** and existing or proposed utility;
 - (8) Existing ground profile (and bedrock when applicable);
 - (9) Profile stationing to coincide with plan stationing;
 - (10) Match line when profile covers more than one page; and
 - (11) For large or complex projects, an insert map indicating immediate plan limits within the overall project.
- C. The lift station plan, profile, and schematic for shall include the following (when applicable):
- (1) Completed Permit form Schedule E;
 - (2) Lift station and wet well plan and profile, including:
 - (a) Critical pump operation elevations (pump off, pump on, etc.);
 - (b) Pump installation elevation;
 - (c) **Structure** rim Elevation; and
 - (d) Initial Check valve and air / vacuum relief valve;
 - (3) Force main profile, including:
 - (a) Location of check valve(s);

- (b) Location of combination air / vacuum relief valve(s) along the alignment; and
 - (c) Stream or **waterway** crossing(s) and crossing provisions;
 - (4) Pump detail (manufacturer cut sheet) indicating specified HP and impeller type;
 - (5) Lift station construction details;
 - (6) Lift station service area map;
 - (7) Calculations for lift station design including:
 - (a) Design population including average and peak flow;
 - (b) Narrative for basis of lift station design population (service area or actual flow monitoring data);
 - (c) Force main pipe friction and design head losses;
 - (d) Wet well capacity, cycle time, detention time;
 - (e) Narrative of alternative power source;
 - (f) System curve and pump performance curve; and
 - (g) Programmable Logic Controller logic including pump operation elevations.
7. The **wetland** plan sheet(s) shall include:
- A. In plan view, the location of **wetland** and **wetland buffer** on or within 100 feet of the **site**, based upon a survey of the **wetland** delineation in accordance with §603;
 - B. Acreage and area of proposed impact to **wetland** or **wetland buffer**; and
 - C. A proposed **wetland mitigation** that meets the requirements of §604, if **wetland** or **wetland buffer** impacts are proposed; the proposed **wetland mitigation** plan sheet(s) shall include the following:
 - (1) Location and acreage of proposed **wetland mitigation**;
 - (2) Soil locations and soil management activities;

- (3) Planting zones, species, quantities, sizes, locations, specifications, methodologies, and details;
 - (4) **Hydrology** monitoring equipment locations;
 - (5) Schedule of earthwork, planting, **maintenance**, and monitoring;
 - (6) Temporary and permanent access locations; and
 - (7) Applicable **maintenance** and conservation easements granted or dedicated to, and accepted by, a governmental entity;
8. The riparian plan sheet(s) shall include:
- A. Location of **riparian environments** located on **site**, based upon a survey of the Ordinary High Water Mark (**OHWM**) of the channel or stream and associated **riparian environment**, in plan view;
 - B. Acreage and area of proposed impact to **riparian environments** as defined in §607.4; and
 - C. Proposed **riparian environment** mitigation plan that meets the requirements of §607, if riparian mitigation is required. The proposed **riparian environment** mitigation plan sheet(s) shall include the following:
 - (1) A plan and profile of the existing and proposed channel showing the channel width, depth, sinuosity, and location of in-stream **structures**;
 - (2) Proposed planting zones, species, quantities, sizes, locations, specifications, methodologies, and details;
 - (3) Schedule of earthwork, planting, **maintenance**, and monitoring;
 - (4) Temporary and permanent access locations; and
 - (5) Applicable **maintenance** and conservation easements granted or dedicated to, and accepted by, a governmental entity; and
9. The recording plan sheet(s) shall include:
- A. Location of all existing and proposed **detention facilities** to meet **District stormwater storage** requirements and to ensure they are permanently sustained and adequately maintained by future **parcel owners**;
 - B. Location of any offsite, trade-off **detention facilities** to meet **District stormwater**

storage requirements not located on the **parcel** and to ensure they are linked to the permitted **parcel development** and permanently sustained and adequately maintained by future/alternate **parcel owners**;

- C. Location of all existing and proposed **volume control practices** to meet **District volume control** requirements and to ensure they are permanently sustained and adequately maintained by future **parcel owners**;
- D. Entire **parcel** area for phased **development** providing notice of **stormwater** detention storage requirements for undeveloped portions of a **parcel** now developed in part under the WMO;
- E. A sewer utility plan for **parcels** outside of a **municipality** delineating any **qualified sewer constriction** to be maintained by the **co-permittee** in the event that the non-municipal agent (Township or County) is unwilling or unable to do so;
- F. Location of all **wetland and riparian mitigation areas** provided to meet **District** mitigation requirements and to ensure they are permanently sustained and adequately maintained by future **parcel owners**; and
- G. Location of all native or natural planting areas to ensure they are permanently sustained and remain as native or natural planting areas by future **parcel owners**.
- H. Location of all **qualified sewer construction** for **parcels** in unincorporated areas, to ensure sewer systems are permanently sustained and adequately maintained by future **parcel owners** in the event the **permittee** (township or other non municipal entity) is unable to do so.

§ 309. Recordation of Watershed Management Permit

- 1. At the expense of the **Co-Permittee**, the **District** will record the recording submittal specified under §308.9, together with the appropriate permit form, Schedule L, with the **Cook County** Recorder of Deeds.
- 2. The **Director of Engineering** may record the **watershed management permit** and any amendments thereto with the **Cook County** Recorder of Deeds.
- 3. Obligations imposed under a **watershed management permit** shall continue for the useful life of the subject **development** or **qualified sewer construction**.

§ 310. Maintenance and Monitoring Plan Submittal

The **maintenance** and Monitoring Plan Submittal shall describe all measures appropriate for the **development** during the construction phase such that requirements of Article 4, Article 5, Article 6, and Article 7 are met, and for the post-construction phase such that all the requirements of Article 9 are met. Such submittal shall include the following when applicable:

1. A schedule of implementation of the **erosion** and **sediment** control plan including, but not limited to:
 - A. A statement that installation of **erosion and sediment control practices** will occur prior to any soil disturbance;
 - B. A schedule for construction activities, including **stabilized** construction entrance installation, **sediment** trapping facility installation, **site** clearing, stockpiling, grading, construction waste disposal, temporary and permanent **stabilization**, and removal of temporary **erosion and sediment control practices**;
 - C. A schedule for inspection, reporting, and **maintenance** of all **erosion and sediment control practices**; and
 - D. Contact information for the party responsible for implementation and **maintenance** of the **site** soil **erosion** and **sediment** control plan;
2. A scheduled perpetual **maintenance** program for **stormwater facilities** including, but not limited to:
 - A. Planned **maintenance** tasks and frequency of each task such as removal of **sediment**, debris, mowing and pruning of vegetation, and restoration of eroded areas;
 - B. Identification of the responsible parties for performing the **maintenance** tasks; and
 - C. A description of applicable temporary and permanent access and **maintenance** easements granted or dedicated to, and accepted by, a governmental entity.
3. A scheduled perpetual **maintenance** program for **qualified sewer construction** including, but not limited to:
 - A. Planned **maintenance** tasks and frequency of each task for the removal of objectionable wastes, fats oils and grease, or any **other wastes** collected in private pre-treatment or separator **structures**;
 - B. Planned routine **maintenance** for all private lift station and pumping facilities;

- C. Operation **maintenance** agreements for all private **service sewers** providing service to multiple **owners**;
 - D. Identification of the responsible parties for performing the **maintenance** tasks; and
 - E. A description of applicable temporary and permanent access and **maintenance** easements granted or dedicated to, and accepted by, a governmental entity.
4. If **wetland mitigation** is required, a **wetland mitigation** document shall be developed in accordance with §604. This document shall include:
- A. Proposed **wetland hydrology** and an inundation and duration analysis;
 - B. Proposed soils and soil management activities;
 - C. Proposed planting zones, species, quantities, sizes, locations, specifications, methodologies, and details;
 - D. Proposed **maintenance** and monitoring plan with **maintenance activities** and performance criteria outlined;
 - E. Schedule of earthwork, planting, monitoring, and **maintenance**;
 - F. A plan for the continued management, operation, and **maintenance** of the **wetland mitigation** measures including the designation of funding sources and the **person** responsible for long-term operation and **maintenance**; and
 - G. A description of applicable temporary and permanent access and **maintenance** and conservation easements granted or dedicated to and accepted by a governmental entity; and
5. If riparian mitigation is required, a **riparian environment** mitigation document shall be developed in accordance with §607. This document shall include:
- A. The proposed methods which will allow naturalizing to occur, such as meandering, pools, or riffles for relocated channels. Methods proposed are expected to be able to withstand all events up to the **base flood** without increased **erosion**;
 - B. The methods by which the normal flow within the channel will be diverted to construct the new or relocated channel;
 - C. The **erosion and sediment control practices** to be utilized to minimize and control **sediment** and degradation of downstream water quality;

- D. The appropriate hydrologic and hydraulic methods analyzing the impacts on **flood** flows and **flood** elevations (to be provided in the **floodplain** and **floodway** submittal) meeting all other requirements in the **Ordinance**, including the **floodplain/floodway** requirements outlined in §601 and §602;
- E. Proposed planting zones, species, quantities, sizes, locations, specifications, methodologies, and details;
- F. Proposed **maintenance** and monitoring plan with **maintenance activities** and performance criteria outlined;
- G. Scheduling of earthwork, planting, **maintenance**, and monitoring;
- H. A plan for the continued management, operation, and **maintenance** of the **riparian environment mitigation** measures, including the designation of funding sources and the **person** responsible for long-term operation and **maintenance**; and
- I. A description of applicable temporary and permanent access and **maintenance** and conservation easements granted or dedicated to, and accepted by, a governmental entity.

§ 311. Record Drawings

- 1. Upon completion of **development**, **record drawings** (as-built) of the **site stormwater** plan sheet(s), **detention facility**, **water quality control practices**, and **stormwater facilities** shall be submitted to the **District**. **Record drawings** shall consist of the following as necessary:
 - A. Record topography with one foot contours;
 - B. Record utility plans; and
 - C. Cross sections.
- 2. All **record drawings** shall contain benchmark information and reference a vertical datum.
- 3. **Record drawing** calculations shall be required showing the as-built volume of **compensatory storage**. As-built **compensatory storage** volume calculations shall incrementally determine both cut and fill volumes within the **regulatory floodplain** as follows:
 - A. Below the 10-year **flood** elevation; and

- B. Between the 10-year **flood** elevation and **BFE**.
- 4. **Record drawing** calculations shall be required showing the as-built volume of the **volume control practices**.
- 5. **Record drawing** calculations shall be required showing the as-built volume of the **detention facility**.
- 6. If the constructed grades, geometries, or inverts of **stormwater facilities, volume control practices**, or **detention facilities** are not in conformance with the approved plans, the **co-permittee** shall be responsible for any modifications required for compliance with this **Ordinance**.
- 7. **Record drawings** shall be prepared, signed, and sealed by a **Professional Engineer** or a **Professional Land Surveyor**. The record calculations shall be prepared, signed, and sealed by a **Professional Engineer**.

§ 312. Terms of Permit/Denial - Appeal

- 1. Upon receipt of a complete **watershed management permit** application, either the **District** or an **authorized municipality** may:
 - A. Request clarifications or revisions from the **co-permittee**;
 - B. Issue a **watershed management permit**;
 - C. Issue a **watershed management permit** with special conditions; or
 - D. Deny the application for a **watershed management permit**.
- 2. Any **co-permittee** aggrieved by the special conditions or denial of a **watershed management permit** may appeal said denial or special conditions as specified in Article 13.

§ 313. Permit Fees

- 1. The **District** shall establish permit fees by ordinance in accordance with the provisions of this **Ordinance**, which may be amended from time to time.
- 2. An **authorized municipality** may establish a schedule of permit fees in accordance with the provisions of this **Ordinance**, which may be amended from time to time.
- 3. Fees shall be based upon the costs either the **District** or **authorized municipality** incurs for all aspects of the permitting process, including, but not limited to, review of permit

applications and inspections.

4. A **co-permittee** shall pay all relevant permit fees at the time of application for a **watershed management permit**.

§ 314. Construction Timeline Requirements and Approval of Plan Revisions

1. Construction activities authorized under a **watershed management permit** must be initiated within one year following the date of permit issuance. Failure to commence construction activities within one year following the date of permit issuance renders the issued **watershed management permit** null and void.
2. Construction activities authorized under a **watershed management permit** must be completed within three years following the date of permit issuance.
3. If construction activity has been started but is not completed within three years of the date of issuance of a **watershed management permit** and the **co-permittee** intends to pursue the permitted activity, then the **co-permittee** shall submit a written request for an extension. Upon receipt of such request, either the **District** or an **authorized municipality** may grant an extension for construction activities under a **watershed management permit**.
4. After issuance of a **watershed management permit**, approval of all material revisions from either the **District** or an **authorized municipality** is required. The **co-permittee** shall submit a written request for approval, the appropriate fee, and the revised plans to either the **District** or an **authorized municipality**. If either the **District** or **authorized municipality** determines that the revised plans are in compliance with the then current requirements of this **Ordinance**, an approval of the revised plans will be issued.

ARTICLE 4. REQUIREMENTS FOR EROSION AND SEDIMENT CONTROL

§ 400. Erosion and Sediment Control General Requirements

1. Any **development** requiring a **watershed management permit** as specified in §201 shall comply with the requirements of Article 4. All **co-permittees** shall submit the documents specified in §302 to demonstrate compliance and develop an **erosion and sediment** control plan.
2. All **developments** that are subject to National Pollutant Discharge Elimination System (**NPDES**) Permit ILR-10 shall meet the submittal and approval requirements of ILR-10.
3. All **developments** shall incorporate **erosion and sediment control practices** into the initial **site** plan. Primary emphasis should be placed on **erosion control practices** as they are preventative source controls, while **sediment control practices** are secondary measures designed to contain eroded soil after it is in transport.
4. For all **developments** that discharge directly to **Jurisdictional Waters of the U.S.**, the hydraulic and hydrologic design of the **erosion and sediment** control plan shall be designed for a **storm event** equal to or greater than a 25-year, 24-hour **storm event**.
5. Design criteria and specifications for **erosion and sediment control practices** shall be taken from the **Illinois Urban Manual**, as amended.
6. Where criteria and specifications are not provided in the **Illinois Urban Manual**, the design criteria and specifications shall be taken from the **TGM**.
7. Other **erosion and sediment control practices** that are equally effective as those in the **Illinois Urban Manual** may be used if either the **District** or an **authorized municipality** provides prior written approval.
8. **Erosion and sediment control practices** shall be functional before disturbances are made to the **site**.

§ 401. Temporary Erosion Control Requirements

1. Existing vegetation shall be preserved where practicable to minimize the area of soil disturbance.
2. Selection of appropriate **erosion control practices** shall consider:
 - A. Seasonal, topographic, and **maintenance** limitations;
 - B. The susceptibility of soils to **erosion**; and

C. Proximity to **flood protection areas**.

3. Temporary **erosion control practices** are **stabilization** measures that include, but are not limited to, protection of existing vegetation or establishment of new vegetation, such as seeding and sod **stabilization**, mulches and soil binders, geotextiles, **erosion control blankets**, plastic covers and mats, wind and dust control measures, **stormwater conveyance channels**, and velocity dissipation measures.
4. Areas where the existing ground cover does not consist of appropriate stabilizing vegetation in the portions of the **site** not under current **development** shall incorporate appropriate **erosion control practices**.
5. **Erosion control practices** shall be maintained on a year-round basis during construction and any periods of construction shutdown until permanent **stabilization** is achieved.
6. For projects involving phased construction, the portions of the **site** where construction activities have temporarily or permanently ceased must have **stabilization** practices completed within seven days, except:
 - A. Where precluded by snow cover, **erosion control practices** shall be completed as soon as practicable; or
 - B. Where construction activity resumes on that portion of the **site** within 14 days from when activities ceased.
7. If a soil stockpile is to remain dormant or undisturbed:
 - A. For time periods between 30 days and 12 months, temporary **stabilization** shall be completed within seven days of the formation of the stockpile; or
 - B. For time periods of more than 12 months, permanent **stabilization** of the stockpile shall be completed within seven days of the formation of the stockpile.
8. Any trenches, holes, or other excavations required for utility installation shall be protected at the end of each workday.
9. **Development sites** shall incorporate appropriate **erosion control practices** that reduce the potential for wind **erosion**.
10. Velocity dissipation measures shall be placed at discharge locations and along the length of any **outfall** channel, as necessary, to provide a non-erosive velocity flow so that the natural, physical, and biological characteristics and functions are maintained and protected.

11. **Erosion control practices** shall be functional before disturbances are made to the **site**.
12. Earthen embankment side slopes shall not exceed 3:1 (horizontal to vertical) and shall be **stabilized** with an **erosion** control blanket.

§ 402. Temporary Sediment Control Requirements

1. Selection of appropriate **sediment control practices** shall consider:
 - A. Seasonal, topographic, and **maintenance** limitations;
 - B. Amount of tributary **drainage area**; and
 - C. Proximity to **flood protection areas**.
2. **Sediment control practices** include, but are not limited to, **silt fences**, fiber rolls and berms, storm drain inlet controls such as barriers and inserts, entrance and exit controls, **sediment** traps, basins, and check **dams**. Straw bales shall not be used as **sediment control practices**.
3. Perimeter **sediment control practices** shall be installed and functioning prior to soil disturbance.
4. **Sediment control practices** shall be maintained on a year-round basis during construction and any periods of construction shutdown until permanent **stabilization** is achieved.
5. **Sediment control practices** shall intercept all **runoff** from **disturbed areas** before **runoff** leaves the **site** under the following conditions:
 - A. **Disturbed areas** draining less than one acre shall be protected by **silt fence** or equivalent; or
 - B. **Disturbed areas** draining more than one acre shall be protected by a **silt fence** and a **sediment basin** or equivalent, which shall be:
 - (1) Sized to intercept the 2-year, 24-hour **runoff** volume from the tributary **drainage area**; and
 - (2) Located at the lowest point of the disturbance.
6. All storm drain inlets draining **disturbed areas** shall be protected with an appropriate **sediment control practice**.
7. A **stabilized** construction entrance/exit shall be provided to prevent soil from being

tracked or deposited onto public or private roadways. Any soil reaching a public or private roadway shall be removed immediately and transported to a controlled **sediment** disposal area.

8. If a soil stockpile is created on the **site**, perimeter **sediment** controls shall be placed around the stockpile immediately.
9. Construction dewatering operations shall be designed and operated so that water discharged from a **site** will meet State of Illinois water quality standards, as set forth in Title 35, Subtitle C, Chapter I, Part 302, Subpart B, of the Illinois Administrative Code.

§ 403. Construction Site Management Requirements

1. All waste generated as a result of **site development** including, but not limited to, any building waste, concrete truck washout, chemicals, litter, sanitary waste, or any **other waste** shall be properly disposed of and shall be prevented from being transported offsite by either wind or water.
2. **Flood protection areas** shall be protected with a minimum of a double-row **silt fence** or equivalent measure.
3. Soil stockpiles or other construction materials shall not be located within **flood protection areas** or their buffers.
4. Temporary stream crossings used during construction shall be designed to convey a 2-year, 24-hour **flood** event without overtopping unless either the **District** or an **authorized municipality** approves a more frequent design event. In addition, the following conditions shall be met:
 - A. Temporary stream crossings shall not reduce the carrying capacity of the channel;
 - B. The entire crossing shall be designed to withstand hydrodynamic, hydrostatic, and erosive forces up to the **base flood** event without washing out;
 - C. Upon completion the temporary stream crossings shall be entirely removed and the stream bed and banks restored to a stable non-erosive condition that incorporates native vegetation where appropriate; and
 - D. **Erosion and sediment control practices** shall be implemented and maintained during installation, **maintenance**, and removal of temporary stream crossings.

§ 404. Permanent Erosion Control Requirements

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1. Permanent **erosion control practices** shall be initiated within seven days following the completion of soil disturbing activities.
2. All temporary **erosion and sediment control practices** shall be maintained until permanent **stabilization** practices are achieved by at least one of the following:
 - A. The establishment of a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent on all unpaved areas and areas not covered by permanent **structures**; and
 - B. Installation of riprap, gabions, or other non-vegetative practices.
3. All temporary **erosion and sediment control practices** shall be removed within 30 days after permanent **stabilization** is achieved in accordance with §404.2.

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ARTICLE 5. REQUIREMENTS FOR STORMWATER MANAGEMENT

§ 500. General Site Development and Stormwater Management Information

1. All **developments** shall meet the requirements specified for general **site development** specified in §501, Article 4, Article 6, and Article 9.
2. All **co-permittees** shall submit the documents specified in Article 3 to verify compliance with the requirements in Article 5.
3. **Development** in **combined sewer areas** shall collect, route and discharge **stormwater** to the **waterway** as required in §502.19.
4. Analysis, design, and performance standards of all **stormwater facilities** required for **development** shall be consistent with the **TGM** for the **Ordinance**.
5. **Stormwater facilities** constructed under the provisions of this **Ordinance** shall be maintained according to the criteria and guidelines established in Article 9.
6. For all **developments**, **stormwater facilities** shall be designed to comply with State of Illinois laws pertaining to drainage
7. For any **Development** subject to an intergovernmental agreement listed in Appendix F, the terms of the intergovernmental agreement shall prevail over any conflicting requirements of Article 5.

§ 501. General Site Development and Stormwater Management Requirements

1. **Development** shall not:
 - A. Increase **flood** elevations or decrease **flood** conveyance capacity upstream or downstream of the area under the **ownership** or control of the **co-permittee**;
 - B. Pose any increase in **flood** velocity or impairment of the hydrologic and hydraulic functions of streams and **floodplains** unless a **water resource benefit** is realized;
 - C. Violate any provision of this **Ordinance** either during or after construction; and
 - D. Unreasonably or unnecessarily degrade surface or ground water quality.
2. **Development** shall meet the **site stormwater** management requirements of Article 5 as summarized in Table 2.

Table 2.
Summary of Site Stormwater Management Requirements*

	§502	§503	§504
Development Type (See Appendix A for definitions)	Runoff Requirements	Volume Control Requirements	Storage Requirements
Single-Family Home	Exempt	Exempt	Exempt
Residential Subdivision	Parcels ≥ 1 acre	Parcels ≥ 1 acre	Parcels ≥ 5 acres
Multi-Family Residential	Parcels ≥ 0.5 acre	Parcels ≥ 0.5 acre	Parcels ≥ 3 acres ‡
Non-Residential	Parcels ≥ 0.5 acre	Parcels ≥ 0.5 acre	Parcels ≥ 3 acres ‡
Right-of-Way	New Impervious Area ≥ 1 acre	New Impervious Area ≥ 1 acre †	New Impervious Area ≥ 1 acre †
Open Space	Parcels ≥ 0.5 acre	Not Applicable	Not Applicable
<p>* Site stormwater management requirements are not required for maintenance activities as defined in Appendix A.</p> <p>† Where practicable.</p> <p>‡ Starting the effective date of this Ordinance, any new development on the parcel that totals either individually or in the aggregate to more than one-half (0.5) of an acre.</p>			

§ 502. Site Runoff Requirements

1. The requirements of this section shall apply to any of the following:
 - A. **Residential subdivision development** on **parcels** totaling one acre or more;
 - B. **Multi-family residential development** on **parcels** totaling one-half of an acre (0.5 acres) or more;
 - C. **Non-residential development** on **parcels** totaling one-half of an acre (0.5 acres) or more;
 - D. **Right-of-way development** totaling one acre or more of **new impervious area**, where practicable; and
 - E. **Open space development** on **parcels** totaling one-half of an acre (0.5 acres) or more.
2. Transfers of waters between **watersheds** shall be prohibited except when such transfers will not violate any of the provisions of §501.1.
3. Concentrated discharges from **stormwater facilities** must enter conveyance systems that are:
 - A. Capable of carrying the **design runoff rate** without increasing **flood** or **erosion** damages downstream or on adjacent property for the 2-year, 10-year, and 100-year **storm events**; or
 - B. Contained within public rights-of-way or public easements.
4. **Design runoff rates** for **major stormwater systems** shall be calculated by using event hydrograph methods. Event hydrograph methods must be HEC-1 (SCS **runoff** method), HEC-HMS, or TR-20. A **critical duration analysis** is required for all methods. Event hydrograph methods shall incorporate the following assumptions:
 - A. Antecedent Moisture Condition II;
 - B. **Bulletin 70** northeast sectional rainfall statistics shall be used for rainfall depths; and
 - C. Appropriate Huff rainfall distributions shall be used when performing the **critical duration analysis**.
5. **Minor stormwater systems** shall be sized to convey **runoff** from the **tributary area** under fully developed conditions consistent with the design requirements of the local

jurisdiction or existing **stormwater** system.

6. **Major stormwater systems** shall be sized to convey the **design runoff rate** of the 100-year **storm event** using the methodology provided in §502.4. The **design runoff rate** for **major stormwater systems** shall include the calculated flows from all the **tributary areas** upstream of the point of design without increasing **flood** or **erosion** damages downstream or on adjacent properties.
7. Drain tiles that are found on the **site** during design or construction of the **development** shall be replaced and incorporated into the new **site** drainage plan or removed and incorporated into the new **site** drainage system, based upon their existing capacity and capability to properly convey low flow **groundwater** and upstream flows. The **co-permittee** shall ensure that:
 - A. The new **site** drainage plan shall not cause damage to upstream and downstream **structures**, land uses, or existing **stormwater facilities**;
 - B. Drain tiles that receive **upstream tributary flows** shall maintain drainage service during construction until the new **stormwater** system can be installed for a permanent connection;
 - C. Replaced drain tile shall be properly reconnected to the downstream system and located within a public **right-of-way** or dedicated easement and marked on the **record drawings**; and
 - D. Drain tiles are not tributary to either a **sanitary sewer** or **combined sewer**.
8. **Major stormwater systems** and **minor stormwater systems** shall be located within easements or rights-of-way explicitly providing public access for **maintenance** of such facilities.
9. **Upstream tributary flows** must be considered for all **developments** and safely routed through or around the **site** in the following manner:
 - A. Where **site** detention is not required in §504.1, the **co-permittee** shall demonstrate that the **development** will not increase velocities or flows downstream or on adjacent properties for the 2-year, 10-year, and 100-year **storm events**, at a minimum, using **critical duration analysis** and the methodology provided in §502.4; and
 - B. Where **site detention** is required in §504.1, the requirements of §504.10 apply.
10. The **runoff** or **flood** water storage function of **depressional storage** on the **site** shall be preserved. For **developments** where the **depressional storage** is altered, the

depressional storage must be compensated in the following manner depending on whether is required per §504.1:

- A. Where **site detention** is not required, the **co-permittee** shall demonstrate that the proposed **development** does not increase velocities, flows, or **flood** elevations downstream nor on adjacent properties for the 2-year, 10-year, and 100-year **storm events** of a 24-hour duration. The analysis shall utilize the methodology described in §502.4 and include the **upstream tributary flow** areas to the existing **depressional storage**; and
 - B. Where **site** detention is required, the requirements of §504.5 shall apply.
- 11. All **developments** shall provide a separate **sanitary sewer** and a separate **storm sewer** within the property lines of the **development**.
 - 12. Maximum flow depths on roads for all **development** shall not exceed twelve inches during the **base flood** condition.
 - 13. Maximum detention depths on new parking lots shall be designed for protection against damages caused by **stormwater** detention inundation, which shall not exceed twelve inches. The inundation hazard below the 100-year high water elevation shall be clearly posted.
 - 14. For **developments** adjacent to a **floodplain**, all **usable space** in new **buildings** or **usable space** added to existing **buildings** shall be:
 - A. Elevated to the **FPE** as determined §601.9; or
 - B. **Floodproofed** or otherwise protected to prevent the entry of surface **stormwater** or floodwater below the **FPE** and such that the **lowest entry elevation** of the **building** is at or above the **FPE**; and
 - C. **Floodproofing** devices should be operational without human intervention. If electricity is required for protection against **flood** damage, there shall be a backup power source that will activate without human intervention.
 - 15. All **usable space** in new **buildings**, or added to existing **buildings**, adjacent to a **major stormwater system** as sized in §502.6 or a **detention facility** overflow path as designed in §504.11.C shall be elevated, **floodproofed**, or otherwise protected to at least one foot above the design elevation associated with the design flow rate to prevent the entry of surface **stormwater**.
 - 16. All **usable space** in new **buildings**, or added to existing **buildings**, adjacent to a **detention facility** as designed in §504.11 shall be elevated, **floodproofed**, or otherwise

protected with a minimum of one foot of freeboard for the **base flood** condition to prevent the entry of surface **stormwater**.

17. To the extent practicable, all **runoff** from rooftops and parking lots that does not discharge into a **detention facility** shall be directed onto pervious surfaces.
18. Proposed **developments** that discharge **stormwater** to a private sewer shall obtain written permission from the sewer **owner**.
19. The **co-permittee** shall procure any required federal, state, or local permits for **stormwater** discharges to a **waterway**. **Development in combined sewer areas** shall collect, route and discharge **stormwater** to either a **waterway** or **storm sewer** if:
 - A. Any boundary of the **development** is within one-eighth of a mile of either a **waterway** or **storm sewer**; or
 - B. Any boundary of the **development** is within one-fourth of a mile of either a **waterway** or **storm sewer** and **stormwater** discharge to either a **waterway** or **storm sewer** is practicable.
20. Proposed **developments** that propose off-site construction on private property shall obtain written permission from the property **owner** and obtain any required easements.
21. Watertight connections are required for any sewer tributary to a **combined sewer**. Watertight connections per **sanitary sewer** standards are required between sewer segments and all manholes, inlets, and **structures**.
22. Underdrains, field tiles, drain tiles, and open jointed pipes shall not be tributary to a **combined sewer**, unless:
 - A. Separation is provided upstream of the receiving **combined sewer**;
 - B. It is intended to protect a **building** foundation and cannot discharge to a **storm sewer**; or
 - C. It is used in conjunction with **green infrastructure** and conforms to the **TGM**.
23. Underdrain systems for athletic fields, tracks and parks shall not be directly connected to any sewer tributary to a **combined sewer** without separation.

§ 503. Site Volume Control Requirements

1. The requirements of this section shall apply to any of the following:
 - A. **Residential subdivision development** on **parcels** totaling one acre or more;
 - B. **Multi-family residential development** on **parcels** totaling one-half of an acre (0.5 acre) or more;
 - C. **Non-residential development** on **parcels** totaling one-half of an acre (0.5 acre) or more; and
 - D. **Right-of-way development** totaling one acre or more of **new impervious area**, where practicable.
2. The first inch of **runoff** from the **impervious area** of **development** on the **site** shall be the **control volume**.
3. **Volume control practices** shall provide treatment of the **control volume**. The **volume control practices** shall be designed according to the following hierarchy:
 - A. **Retention-based practices** with quantifiable storage capacity shall be the primary form of water quality treatment. **Retention-based practices** shall:
 - (1) Be sized to retain and infiltrate the **control volume**;
 - (2) Include, but not be limited to, infiltration trenches, infiltration basins, porous pavement, bio retention systems, dry wells, open channel practices fitted with check **dams**, retention storage below the outlet of a **detention facility**, and constructed **wetlands** that have quantifiable storage; and
 - (3) Provide pretreatment measures to protect the functionality of **retention-based practices** where necessary. **Flow-through practices** included in §503.3.B may be used to meet the pretreatment requirement where appropriate.
 - B. **Flow-through practices** shall be required for treatment of any portion of the **control volume** that has not been treated using **retention-based practices**. **Flow-through practices** shall:
 - (1) Be sized to filter or detain the **control volume** as it passes through the **structure**; and
 - (2) Include, but not be limited to, vegetated filter strips, bio swales, constructed **wetlands**, catch basin inserts, and oil and grit separators.

- C. For **redevelopments** with **site** constraints that prevent use of **retention-based practices** to retain the **control volume** in full, a co-applicant may reduce existing **impervious area** within the **redevelopment** area by five-percent (5%) for every twenty five percent (25%) of **control volume**, however, the co-applicant shall:
 - (1) Demonstrate that **site** limitations prevent the co-applicant from providing the entire **control volume** onsite; and
 - (2) Provide the **control volume** onsite to the maximum extent practicable with **retention-based practices**.

§ 504. Site Detention Requirements

1. The requirements of this section shall apply to any of the following:
 - A. **Residential subdivision development** on **parcels** totaling five acres or more;
 - B. **Multi-family residential development** on **parcels** totaling three acres or more with new **development** on the **parcel** that totals either individually or in the aggregate to more than one-half of an acre (0.5 acre) after the effective date of this **Ordinance**;
 - C. **Non-residential development** on **parcels** totaling three acres or more with new **development** on the **parcel** that totals either individually or in the aggregate to more than one-half of an acre (0.5 acre) after the effective date of this **Ordinance**; and
 - D. **Right-of-way development** totaling one acre or more of **new impervious area**, where practicable.
2. The area of **development** shall be used to calculate the **development's allowable release rate**.
3. The **allowable release rate** for a **development** shall be:
 - A. 0.30 cfs/acre of **development** for the **storm event** having a one percent probability of being equaled or exceeded in a given year (100-year **storm event**) until January 1, 2019; and
 - B. 0.15 cfs/acre of **development** for the **storm event** having a one percent probability of being equaled or exceeded in a given year (100-year **storm event**) after and including January 1, 2019.

4. The release rate from the **detention facility** in addition to any **unrestricted flow** shall not exceed the **allowable release rate** for the **development**.
5. For **sites** where **depressional storage** exists and where the existing **runoff** rate for the **development** is less than the **allowable release rate** provided in §504.3, then the **allowable release rate** and the corresponding **detention facility** volume shall be based on the existing **runoff** rate. The existing **runoff** rate shall be calculated using the methods described in §504.9.
6. When all **runoff** from a **development** is not captured in the **detention facility**, the **unrestricted flow** shall be addressed by:
 - A. Demonstrating that the **unrestricted flow** does not cause off-site damage; and
 - B. Providing for **unrestricted flow** by one of the following methods:
 - (1) Diverting an equivalent **upstream tributary area** where detention is not provided to the **detention facility**;
 - (2) Calculating the **unrestricted flow** rate using the methods in §504.9 and reducing the required **site runoff** release rate such that the total developed release rate from the **development site** equals the **allowable release rate**; or
 - (3) Planting the **unrestricted flow** area with native deep-rooted vegetation approved by either the **District** or an **authorized municipality**. **Unrestricted flow** areas shall be placed in an easement and maintained as a **native planting conservation area** in perpetuity. The **allowable release rate** for the **development** shall be based on the **development** area tributary to the **detention facility**.
7. **Detention facility** volume shall be calculated using either an event hydrograph routing method or the nomograph relating percent impervious to unit area as presented in the **TGM**. The nomograph shall not be used in any of the following scenarios:
 - A. The **allowable release rate** is affected by **depressional storage** on the **site** described in §504.5;
 - B. The **allowable release rate** is affected by **unrestricted flow** as described in §504.6.B(2) or §504.6.B(3);
 - C. When there are **upstream tributary flows** to the **detention facility** described in §504.10; or

- D. When there are tailwater conditions on the **detention facility** outlet **structure**.
8. The **detention facility** volume calculated in §504.7 can be reduced by:
- A. The volume of the retention-based **control volume** provided in §503.3.A; and
 - B. The volume of any **retention-based practice** listed in §503.3.A(2) in excess of the **control volume** if all of the following conditions are met:
 - (1) The storage volume of the **retention-based practice** is quantifiable;
 - (2) The storage volume of the **retention-based practice** is accessed under the 100-year **storm event**;
 - (3) The **development** complies with the **allowable release rate** specified in §504.3; and
 - (4) **Maintenance** responsibilities for the **retention-based practice** are delineated in the **maintenance** plan required in Article 9.
9. Event hydrograph methods shall be HEC-1, HEC-HMS, TR-20, or method approved by the **District**, using SCS curve number methodology and outlet control routing option. Event hydrograph methods shall incorporate the following assumptions:
- A. Antecedent Moisture Condition II; and
 - B. 100-year **storm event** with a 24-hour duration, as specified in **Bulletin 70** northeast sectional rainfall statistics and appropriate Huff time distribution of heavy storm rainfall.
10. **Developments** that have **upstream tributary flow** to the **site** shall provide one of the following **site runoff** measures:
- A. Provide **detention facility** volume for the **development** at the **allowable release rate** while bypassing **upstream tributary flows** described in §502.9 (**bypass flow**);
 - B. Provide **detention facility** volume to accommodate both the **runoff** for the **development** and the **upstream tributary flow** area on the **site** at the **site's allowable release rate**; or
 - C. Provide sufficient **detention facility** volume to accommodate **runoff** from the **development** and the **upstream tributary flow** area at a release rate that ensures that no adverse off-site impacts will occur and that a **water resource benefit** is provided. The **co-permittee** shall consider **runoff** from all **tributary**

areas and demonstrate the impacts for 2-year, 10-year, and 100-year **storm events**, at a minimum, using **critical duration analysis** and the methodology provided in §504.9. The minimum **detention facility** volume required shall be based on the **site allowable release rate** as determined in §504.3 and §504.4.

11. **Detention facilities** shall be designed and constructed to:
 - A. Be designed to function with a gravity outlet wherever possible;
 - B. Function without human intervention and under tailwater conditions with minimal **maintenance**;
 - C. Provide an overflow **structure** and overflow path that can safely pass a **design runoff rate** of at least 1.0 cfs/acre of **tributary area** to the **detention facility**;
 - D. Provide side slope **stabilization**;
 - E. Provide earth **stabilization** and armoring with riprap, concrete or other durable material when high erosive forces could lead to soil **erosion** or washout. Examples of where armoring may be required include:
 - (1) Storm sewer flared end sections; and
 - (2) Emergency overflows.
 - F. Be accessible and maintainable; and
 - G. Provide a **maintenance** agreement.
12. The outlet control device for **detention facilities** shall be:
 - A. Located within the property boundary when possible;
 - B. Durable and permanent;
 - C. Visible and accessible for **maintenance**;
 - D. Located on the outlet side of a manhole **structure**;
 - E. Designed to be self cleaning; and
 - F. Designed to incorporate a backflow prevention device if discharging to a **combined sewer**.

13. **Detention facilities** in areas outside of the **regulatory floodway**, but within the **regulatory floodplain**, shall:
 - A. Conform to all applicable requirements specified in Article 6; and
 - B. Store the **site runoff** from the **development** such that the required post **development** release rate is not exceeded, assuming a zero release rate below the **BFE**.
14. If it is not practicable to provide a **detention facility** onsite, an **offsite detention facility** may be constructed offsite if all of the following conditions are met:
 - A. The **control volume** required in § 503 is provided onsite;
 - B. The **co-permittee** demonstrates that **site** limitations prevent the **development** from providing the full volume of the **detention facility** onsite;
 - C. The **parcel** area is less than ten acres;
 - D. **Stormwater** detention is provided in accordance with the following hierarchy:
 - (1) Partially onsite in a **detention facility** with supplemental storage offsite in an **offsite detention facility** according to §504.14.D(2)-**Error! Reference source not found.**;
 - (2) Offsite in an **offsite detention facility** where the **development** conveys the 100-year **storm event** to the **offsite detention facility**;
 - (3) Offsite in an **offsite detention facility** in a location that is upstream or hydrologically equivalent to the **development** in the same **subwatershed**;
or
 - (4) Offsite in an **offsite detention facility** within the same **subwatershed**.
 - E. The **offsite detention facility** shall:
 - (1) Meet all of the requirements of this Article 5;
 - (2) Obtain a **watershed management permit** separate from the **development**;
 - (3) Provide 100% percent of the deficient onsite volume exclusively for the associated **development**;
 - (4) Capture **stormwater runoff** from a **parcel** that is not tributary to an existing **stormwater detention facility**;

- (5) Be functional before the **co-permittee** requests final inspection of the associated **development**; and
 - (6) Encumber the underlying **parcel** to ensure perpetual existence, function, and **maintenance**.
- 15. **Detention facilities** shall be functional before building and occupancy permits are issued for residential and **non-residential subdivisions** or **sanitary sewers** are placed in service.
- 16. **Detention facilities** shall be functional when practicable for single **parcel developments** before general construction begins.
- 17. A **development** is not required to comply with the **site** detention requirements of §504 if the **development** satisfies all of the following conditions:
 - A. The **development** discharges **stormwater** to a **storm sewer** tributary to Lake Michigan;
 - B. The downstream receiving **storm sewer** has adequate capacity as determined by the governing **municipality**;
 - C. The **development** complies with the **site** volume control requirements of §503; and
 - D. The **development** intercepts and treats all **stormwater runoff** onsite to improve water quality prior to discharge from the **development**.

§ 505. Allowances for Redevelopment

- 1. For **redevelopment** of a **site** tributary to an **existing detention facility** which will only require a marginal increase in the new total storage required in the same **existing detention facility**, the increase in storage may be waived if the following conditions are met:
 - A. Actual storage volume is verified to meet or exceed the required detention volume based on recent survey, signed and sealed by either a **Professional Engineer** or **Professional Land Surveyor**; and
 - B. The marginal increase in incremental required storage volume is less than one-tenth (0.10) of an acre-foot or within two-percent (2%) of the existing total storage.

2. Incidental disturbance to an **existing detention facility** to provide the new required additional detention volume may be considered **non-qualified development**.
3. Allowances noted below may be granted for the **redevelopment** of a **parcel** that was planned to be tributary or contains within the **parcel** an **existing detention facility** permitted under a **sewerage system permit**:
 - A. If the **redevelopment** meets all of the following conditions:
 - (1) The design of the **existing detention facility** is documented and approved under an existing **sewerage system permit** (commonly referred to as Schedule D);
 - (2) Actual storage volume is verified to meet or exceed the required detention volume under the permit based on a recent survey, signed and sealed by either a **Professional Engineer** or **Professional Land Surveyor**;
 - (3) The **redevelopment** provides treatment of the **control volume** as required in §503; and
 - (4) The **redevelopment** provides adequate capacity to convey **stormwater runoff** to the **existing detention facility** for all storms up to and including the 100-year **storm event**;
 - B. Then, the following **redevelopment** allowances may be granted:
 - (1) If the **redevelopment's** composite **runoff** coefficient does not exceed the design composite **runoff** coefficient of the **existing detention facility** as designed and intended under the original permit, additional stormwater detention volume is not required;
 - (2) If the **redevelopment's** composite **runoff** coefficient exceeds the design composite **runoff** coefficient of the **existing detention facility** as designed and intended under the original permit, additional **stormwater** detention volume shall be provided for the **redevelopment**. In such situations, the modified rational method using **Bulletin 70** rainfall data may be used to calculate the additional required storage volume. The release rate for the **redevelopment** will be based as follows:
 - (a) For **redevelopment** of areas within a permitted **parcel** intended to be tributary to an **existing detention facility**, the existing approved release rate and restrictor may be retained;

- (b) For **redevelopment** of areas within a permitted **parcel**, which was never intended to be tributary to an **existing detention facility**, however, will be tributary upon **redevelopment**; the original release rate for the basin will be recalculated based on a pro rata area amount. The total new required storage volume will be updated based on the new required release rate and the restrictor may need to be replaced.
- C. For **redevelopment** of a **parcel** never planned to be tributary or that does not contain an **existing detention facility** permitted under a **sewerage system permit**, the **redevelopment** shall be subject to the standard **stormwater** management requirements described in §500 through §504.

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ARTICLE 6. REQUIREMENTS FOR FLOOD PROTECTION AREAS

§ 600. Flood Protection Areas

1. **Flood Protection Areas** include **floodplains**, **wetlands**, **wetland buffers**, and **riparian environments**. Requirements for determining **floodplains** are specified in §601. Requirements for delineating **wetlands** are specified in §603. Requirements for determining **riparian environments** are specified in §606.
2. Any **development** within the **floodplain** shall comply with the requirements of §601 and §602 and the requirements of Article 4, Article 5, and Article 9.
3. Any **development** within **wetlands** shall comply with the requirements of §603, §604, and §605 and the requirements of Article 4, Article 5, and Article 9.
4. Any **development** within **riparian environments** shall comply with the requirements of §606 and §607 and the requirements of Article 4, Article 5, and Article 9.
5. All **co-permittees** shall submit the documents specified in Article 3 to verify compliance with the requirements of this **Ordinance**.
6. Compliance with Article 6 does not excuse the **co-permittee** from meeting all applicable federal, state, and local requirements including, but not limited to, the local **NFIP** regulations.
7. Any human-induced change in improved or unimproved real estate within the **regulatory floodplain** not considered to be **development** under this **Ordinance** shall meet the requirements of the local jurisdiction's **NFIP** ordinance. Compliance with §601 and §602 does not excuse the **co-permittee** from meeting all local requirements for participation in the **NFIP**.

§ 601. Requirements for Floodplain, Regulatory Floodway, and Flood Protection Elevation Determination

1. **Development** within **floodplains** shall not:
 - A. Result in any new or additional expense to any **person** other than the **co-permittee** for **flood** protection or for lost environmental stream uses and functions;
 - B. Increase **flood** elevations or decrease **flood** conveyance capacity upstream or downstream of the area not under the **ownership** or control of the **co-permittee**;

- C. Pose any increase in **flood** velocity or impairment of the hydrologic and hydraulic functions of streams and **floodplains** unless a **water resource benefit** is realized;
 - D. Violate any provision of this **Ordinance** either during or after construction; and
 - E. Unreasonably or unnecessarily degrade surface or ground water quality.
- 2. Any **co-permittee** proposing **development** shall identify the elevation and boundary of the **regulatory floodplain** and the limits of the **regulatory floodway** within the **development site**.
 - 3. The **regulatory floodplain** shall be determined by the **base flood** elevation (**BFE**) as determined by the effective **Cook County** Flood Insurance Study (**FIS**) and associated **FIRMs**, including any Letter of Map Change (**LOMC**) that has been issued by the Federal Emergency Management Agency (**FEMA**). The **co-permittee** is responsible for utilization of the current applicable **FIRM** and any associated **LOMC**. A list of **FIRMs** for **Cook County** is provided in the **TGM**. **FIRMs** are available at **FEMA's** Map Service Center; a web link to **FEMA's** Map Service Center is provided in the **TGM**.
 - 4. Determination of the **BFE** in **Special Flood Hazard Areas** shown on the **FIRM** associated with the effective **FIS** shall be determined for:
 - A. AE Zones by using the 100-year profile at the **development site**;
 - B. AH Zones by using the elevation noted on the applicable **FIRM**;
 - C. AO Zones by using the **highest adjacent grade** plus the depth number shown on the applicable **FIRM**, or two feet above the **highest adjacent grade** if no depth number is provided;
 - D. Areas shown as A Zones on the effective **FIS**, a **BFE** shall be determined by a project-specific **floodplain** study approved by either the **District** or an **authorized municipality**. This study shall be approved by **OWR** in cases where both:
 - (1) The **drainage area** is one square mile or greater; and
 - (2) The **development** is associated with a permit that will be issued by **OWR**.
 - 5. When a known **flood** hazard is not identified as a **Special Flood Hazard Area** on the **FIRM**, the **District** or an **authorized municipality** may require the **co-permittee** to perform a project-specific **floodplain** study to determine the project-specific **100-year flood elevation**. This study shall be approved by **OWR** in cases where both:
 - A. The **drainage area** is one square mile or greater; and

- B. The **development** is associated with a permit that will be issued by **OWR**.
- 6. Project-specific **floodplain** studies shall be performed by a **Professional Engineer** using the appropriate models when applicable:
 - A. TR-20, HEC-1, or HEC-HMS hydrologic model;
 - B. HEC-2 or HEC-RAS hydraulic model; or
 - C. A model or technique approved by the **District** and **OWR**.
- 7. The **co-applicant** shall observe the **regulatory floodway** as designated by **OWR**, which is delineated on the effective **FIRM**. If a **floodway** is not designated on the **FIRM** then the following shall apply:
 - A. When the **drainage area** is greater than one square mile, then the **regulatory floodway** shall be deemed to be the limits of the **regulatory floodplain** and subject to all **floodway** requirements of this **Ordinance** with the exception of the **appropriate use** criteria in §602.27; or
 - B. When the **drainage area** is less than one square mile, then a **floodway** designation is not required.
- 8. The **regulatory floodway** may be re-designated by the **co-permittee**. For **floodways** where the **drainage area** is greater than one square mile, approval of the re-designation shall be required by **FEMA**, through a Conditional Letter of Map Revision (**CLOMR**) and/or Letter of Map Revision (**LOMR**). **OWR** concurrence is also required by **FEMA** where a **regulatory floodway** is re-designated.
- 9. The **co-permittee** shall determine the flood protection elevation (**FPE**). The **FPE** shall be two feet above the highest **100-year flood elevation** as determined by:
 - A. The **BFE** associated with the effective **Cook County FIS**, including any Letter of Map Change (**LOMC**) that has been issued by **FEMA**;
 - B. Project-specific **100-year flood elevation** developed in §601.5; and
 - C. The 100-year inundation elevations identified in the **District's DWPs**.

§ 602. Requirements for Development within the Floodplain

1. For purposes of this §602, the **floodplain** shall be the area of the **regulatory floodplain** (§601. 3 and §601.4), inundation areas identified by a **District DWP**, and any inundation areas resulting from the **100-year flood elevation** determined in §601.5. The **100-year flood elevation** in this §602 is the highest of the **BFE**, the project-specific **100-year flood elevation** or 100-year inundation elevation used in §601.9.
2. For new **buildings** and additions to existing **buildings** in a **floodplain** and for **substantial improvements** to existing **buildings** in a **regulatory floodplain**, all **usable space** shall be elevated to at least the **FPE** in accordance with the requirements specified in §602.12, §602.13, and §602.14, unless protected in accordance with §602.3.
3. For new **buildings**, additions to existing **buildings**, or **substantial improvements** to existing **buildings** in the **regulatory floodplain** and outside the **regulatory floodway**, all **usable space** below the **BFE** shall comply with the following:
 - A. The lowest adjacent grade to the foundation shall be at or above the **BFE** for a minimum distance of ten (10) feet beyond the outside face of the **structure**;
 - B. The lowest opening in the foundation wall, shall be at or above the **FPE**;
 - C. Provide **compensatory storage** per §602.9 and §602.10;
 - D. Demonstrate that for a **building** and **building site** is reasonably safe from **flood**ing per design standards requirements in Technical Bulletin 10-01 issued by **FEMA**; and
 - E. Obtain a Letter of Map Revision Based on Fill (**LOMR-F**) if the **building site** in the **regulatory floodplain**.
4. New **structures** other than **buildings** in the **floodplain** shall be either elevated to at least the **FPE** or designed for protection against physical **flood** damage. **Floodproofing** devices shall be operational without human intervention and shall meet the requirements in §602.12 or §602.14.
5. Existing **structures** in the **floodplain** may be **floodproofed**. **Floodproofing** shall meet the requirements listed in §602.12 or §602.14 and shall be operational without human intervention.

6. **Manufactured homes** that are placed or **substantially improved** on **sites** in **new manufactured home parks or subdivisions**, in an **expansion to an existing manufactured home park or subdivision**, or outside an **existing manufactured home park or subdivision** in a **floodplain** shall require all of the following:
 - A. Elevation of all stands or pads to or above the **FPE**;
 - B. Adequate access and drainage;
 - C. Applicable design and construction standards for any pilings used to elevate to or above the **FPE**; and
 - D. Anchoring to resist flotation, collapse, and lateral movement in accordance with the rules and regulations for the Illinois Mobile Home Tiedown Act (210 ILCS 120).
7. A parked **recreational vehicle** in a **floodplain** shall be required to meet the elevating and anchoring requirements of §602.12 unless the vehicle is:
 - A. On the **site** for fewer than 180 consecutive days; or
 - B. Fully licensed and ready for highway use. A **recreational vehicle** is ready for highway use if it is on its wheels and/or jacking system, is attached to the **site** only by quick-disconnect style utility and service devices, and has no permanently attached additions.
8. New parking lots built below the **100-year flood elevation** shall clearly post the potential **flood** hazard.
9. **Compensatory storage** shall be required for any fill, **structure**, or other material above grade in the **regulatory floodplain** that temporarily or permanently displaces **floodplain** storage volume. In addition, **compensatory storage** shall:
 - A. Equal at least 1.1 times the volume of **flood** storage lost below the **BFE**;
 - B. Be operational prior to placement of fill, **structures**, or other materials temporarily or permanently placed in the **regulatory floodplain**;
 - C. Be provided in the immediate vicinity of the **flood** storage lost, where practicable;
 - D. Be provided in addition to the **site** detention volume; and
 - E. Drain freely and openly to the **waterway**.

10. **Compensatory storage** shall be provided incrementally as follows:
 - A. All **regulatory floodplain** storage lost below the existing regulatory 10-year flood elevation shall be replaced below the proposed regulatory 10-year flood elevation;
 - B. All **regulatory floodplain** storage lost above the existing regulatory 10-year flood elevation shall be replaced above the proposed regulatory 10-year flood elevation; and
 - C. The additional **compensatory storage** required beyond a one to one (1:1) ratio may be placed above or below the proposed regulatory 10-year flood elevation.
11. **Compensatory storage** is not required for the **floodproofing** of existing **buildings** for the **floodplain** volume displaced by the **building** and within the area of ten feet from the **building**.
12. New **structures** that are elevated, existing **structures** that are **floodproofed**, or **substantial improvements** shall:
 - A. Be anchored to prevent flotation, collapse, or lateral movement;
 - B. Use **flood** resistant materials below the **FPE**;
 - C. Use construction methods and practices that do not increase the potential for increases in **flood** damage;
 - D. Elevate electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities to the **FPE** or higher;
 - E. Provide adequate access and drainage; and
 - F. Provide a backup power source that will activate without human intervention if electricity is required.
13. Any fill required to elevate a **building** must extend at least ten feet beyond the foundation before the grade slopes below the **100-year flood elevation**.
14. When a **structure** is elevated by means other than filling:
 - A. The **usable space** of any **building** and all electrical, heating, ventilating, plumbing, and air conditioning equipment of any **structure** shall be located at or above the **FPE**.

- B. Elevation can be accomplished using stilts, piles, walls, or other foundations. Walls and foundations below the **lowest floor** that are subject to **flooding** shall be designed so that hydrostatic forces on exterior walls are automatically equalized by allowing for the entry and exit of floodwaters and shall be anchored and aligned in relation to **flood** flows and adjoining **structures** so as to minimize exposure to known hydrodynamic forces such as currents, waves, ice, and floating debris. Designs for meeting this requirement shall be prepared, signed, and sealed by a structural engineer or licensed architect in the State of Illinois and meet or exceed the following minimum criteria:
- (1) A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to **flooding**;
 - (2) The bottom of all openings shall be no higher than one foot above grade;
 - (3) Openings may be equipped with screens, louvers, valves, or other coverings, provided that such coverings do not impede the automatic entry and exit of floodwaters;
 - (4) The grade interior to the foundation of the **structure** shall not be more than two feet below the lowest adjacent exterior grade;
 - (5) An adequate drainage system must be installed to remove floodwaters from the area interior to the **structure** foundation within a reasonable period of time after the floodwaters recede; and
 - (6) All materials and **structures** below the **FPE** shall be resistant to **flood** damage.
- C. **Compensatory storage** for elevation of **structures** allowed in §602.14 shall not be required.
15. All **CLOMR**, **LOMR**, and **LOMR-F** applications require the approval of the governing **municipality** and shall be submitted to either the **District** or an **authorized municipality** concurrently with the application to **FEMA**.
 16. No filling, grading, dredging, excavating, or other proposed **development** within the **regulatory floodplain** which result in an increase to the **FIS** effective **BFE** or a modification to the **regulatory floodway** boundary shall take place until a **CLOMR** is issued by **FEMA** and a **floodway** construction permit is issued by **OWR**.
 17. If a **LOMR** is required by **FEMA**, no **building** construction shall take place until the approved **LOMR** is received.

18. **Stormwater facilities** within the **regulatory floodplain**, such as culverts, bridges, and impoundments that have an associated backwater shall not be removed, replaced, or modified unless all of the following apply:
 - A. All **structures** and their associated **lowest entry elevations** within the backwater of the existing **stormwater facility** are identified;
 - B. **Hydraulically equivalent compensatory storage** is provided to mitigate any potential increases in flow or **flood** elevations upstream or downstream of the **stormwater facility**; and
 - C. A **water resource benefit** is provided.
19. All proposed sanitary structures shall have above ground openings located above the **FPE** or be constructed with lock-type, watertight **structure** lids.
20. Lift station facilities (including mechanical and electrical equipment)
 - A. Existing lift station facilities to be repaired or rehabilitated shall have all above ground equipment elevated above the **FPE**. Where possible, ground openings and vents shall be adjusted above the **FPE** or be constructed with lock-type, watertight **structure** lids to protect against the **base flood**.
 - B. New lift station facilities shall be located above the **FPE** and outside the limits of the **regulatory floodplain**. New lift stations facilities shall also be carefully located to ensure **maintenance** access at all times during the **base flood**.
21. New and replacement water supply systems, wells and shall either have all above ground openings above the **FPE** or be watertight.
22. New waste disposal systems on the **site** shall not be constructed within the **floodplain**.
23. Construction of **Detention facilities** within the **regulatory floodway** is strictly prohibited.
24. **Detention facilities** located outside of the **regulatory floodway** but within the **floodplain** shall:
 - A. Store the required **site runoff** under all stream flow and backwater conditions up to the **100-year flood elevation**, assuming a zero release rate below the **100-year flood elevation**; and
 - B. Not allow design release rates to be exceeded under any stream elevation less than the **100-year flood elevation**.

25. New or modified **storm sewer outfalls** shall meet the requirements of §501 and §502 and shall comply with **Illinois Department of Transportation's (IDOT)** minimum standards. Relevant **IEPA** and **NPDES** permits shall be required for all new outfalls to **waterways** and Lake Michigan.
26. Temporary or permanent storage of items susceptible to **flood** damage is prohibited unless elevated or **floodproofed** to the **FPE**.
27. **Development** shall preserve effective **regulatory floodway conveyance** such that there will be no increases in **flood** elevations, flow rates, or **regulatory floodway** velocity, unless these increases are contained in a **public flood easement**, a **water resource benefit** is provided, and a **CLOMR** is issued by **FEMA** prior to any work in the **regulatory floodway**.
28. For any proposed **development** within the **regulatory floodway** the **co-permittee** shall provide either the **District** or an **authorized municipality** with an evaluation of the hydrologic and hydraulic impacts of the **development**:
 - A. Using the **regulatory floodplain** model, if available, or a study as directed by the **District** using the methodology provided in §601.6;
 - B. For the 2-year, 10-year, and 100-year **storm events** for the 24-hour event, at a minimum; and
 - C. For existing and any future planned **watershed** conditions as directed by either the **District** or an **authorized municipality**.
29. Within the **regulatory floodway**, any proposed **development** shall meet the requirements of §602 and only the following **appropriate uses** shall be considered for permits:
 - A. Flood control **structures**, dikes, **dams**, and other public works or private improvements relating to the control of drainage, **flooding**, or **erosion** or water quality or habitat for fish and wildlife that provides a **water resource benefit**;
 - B. **Structures** or facilities relating to the use of, or requiring access to, the water or shoreline, such as pumping and treatment facilities, and facilities and improvements related to recreational boating, commercial shipping, and other functionally dependent uses;
 - C. Storm and sanitary sewer **outfalls**;
 - D. Underground and overhead utilities;

- E. Recreational facilities such as playing fields and trail systems including any related fencing built parallel to the direction of **flood** flows;
- F. Detached garages, storage sheds, or other non-habitable **accessory structures** to existing **buildings** that will not block **flood** flows. This does not include the construction or placement of any other new **structures**, fill, **building** additions, **buildings** on stilts, fencing (including landscaping or plantings designed to act as a fence), and the storage of materials;
- G. Bridges, culverts, roadways, sidewalks, railways, runways and taxiways, and any modification thereto;
- H. Parking lots built at or below existing grade where either:
 - (1) The depth of **flood**ing at the **BFE** will not exceed one foot; or
 - (2) The parking lot is for short-term outdoor recreational use facilities where the **co-permittee** agrees to restrict access during overbank **flood**ing events and agrees to accept liability for all damage caused by vehicular access during all overbank **flood**ing events. Signs shall be posted to clearly identify the **flood**ing hazard.
- I. Aircraft parking aprons built at or below ground elevation where the depth of **flood**ing at the **BFE** will not exceed one foot;
- J. **Regulatory floodway** re-grading without fill to create a positive slope toward the watercourse;
- K. **Floodproofing** activities to protect existing **structures** including, but not limited to, constructing water tight window wells and elevating;
- L. The replacement, reconstruction, or repair of a damaged **building**, provided that the outside dimensions of the **building** are not increased, and provided that, if the **building** is damaged to 50 percent or more of the **building**'s market value before it was damaged, the **building** will be protected from **flood**ing to or above the **FPE**; and
- M. Modifications to an existing **building** that would not increase the enclosed floor area of the **building** below the **BFE**, and would not block **flood** flows to including, but not limited to, fireplaces, bay windows, decks, patios, and second story additions.

30. Transition sections are required for the calculation of effective **regulatory floodway conveyance** due to the modification or replacement of existing bridge and culvert **structures** or to compensate for lost conveyance for other **appropriate uses**. The following expansion and contraction ratios shall be assumed to determine transition sections:
- A. Water will expand at a rate no faster than one foot horizontal for every four feet of flooded stream length;
 - B. Water will contract at a rate no faster than one foot horizontal for every one foot of flooded stream length; and
 - C. Water will not expand or contract faster than a rate of one foot vertical for every ten feet of flooded stream length.

§ 603. Requirements for Wetland Boundary, Quality, and Buffer Width Determination

1. **Wetlands** provide the following functions:
 - A. Facilitate hydrologic functions, including infiltration, evaporation, and evapotranspiration;
 - B. Reduce **flood** flow rates, velocities, and volumes;
 - C. Provide **flood** control by storing **stormwater**;
 - D. Prevent **erosion** and promote bank stability of streams, **lakes**, and ponds;
 - E. Control **sediment** from upland areas reducing the impact of urbanization on stream habitat and water quality by filtering and assimilating nutrients discharged from surrounding uplands;
 - F. Serve as important areas for de-nitrification, which reduces growth of algal blooms and subsequent depressed levels of dissolved oxygen in-stream;
 - G. Provide an effective mechanism for treatment of contaminated surface **runoff**; and
 - H. Provide habitat for both aquatic and terrestrial fauna and flora.
2. Any **co-permittee** proposing **development** shall investigate the **site** for the presence of **wetlands**. The **co-permittee** shall use the following sources and methods to determine if **wetland** areas may exist on the **site**:

- A. Onsite **wetland** investigation;
 - B. **National Wetland Inventory (NWI)** Maps from the United States Fish and Wildlife Service (USFWS);
 - C. National Resource Conservation Service (**NRCS**) wetland inventory maps; and
 - D. **Wetlands** identified in current and historical aerial photographs, United States Geological Survey (USGS) hydrological atlas, soil survey of **Cook County**, and USGS topographic maps.
3. The **co-permittee** shall identify the boundaries, extent, function, and quality of all **wetland** areas on the **site**. The presence and extent of **wetland** areas on the **site** shall be determined as the result of an onsite **wetland** delineation according to the following:
- A. All onsite **wetland** delineations are required to use procedures in accordance with the current **Corps'** Wetland Delineation Manual, including any relevant regional supplements, (**Corps Wetland Delineation Manual**) or superseded and as authorized under Section 404 of the Clean Water Act; or
 - B. **Farmed wetlands** located on the **site** in agricultural areas which are in production and which are not determined to be **wetlands** through the federal **wetland** methodology shall be delineated through the current National Food Security Act Manual methodology;
 - C. Agricultural areas that have been abandoned for five consecutive years shall be delineated in accordance with the **Corps Wetland Delineation Manual**.
4. The **co-permittee** shall request a **Corps jurisdictional determination** of any identified **wetland** areas on the proposed **site**.
5. The approximate location, extent, and quality of offsite **wetlands** within 100 feet of the **site** shall be identified. Offsite **wetlands** shall be delineated using the **Corps Wetland Delineation Manual**, or if delineation is unavailable or cannot be performed, the approximate limits of **wetlands** shall be identified using one or more of the following resources:
- A. **National Wetland Inventory (NWI)** Maps from the United States Fish and Wildlife Service (USFWS);
 - B. National Resource Conservation Service (**NRCS**) wetland inventory maps; and

- C. **Wetlands** identified in current and historical aerial photographs, United States Geological Survey (USGS) hydrological atlas, soil survey of **Cook County**, and USGS topographic maps.
- 6. The following **isolated wetland** areas are exempt from the **wetland** requirements of this **Ordinance**:
 - A. **Wetlands** in roadside ditches created by excavation in upland areas;
 - B. **Wetlands** created by excavation or by other unfinished **development** activities in upland areas;
 - C. **Wetlands** created by artificial **hydrology** including, but not limited to, irrigation or **detention facility** outlets which would revert to upland areas if irrigation were to cease;
 - D. **Wetlands** created by the construction of **stormwater facilities** in upland areas, provided that the facility was not created for the purpose of **wetland mitigation**; and
 - E. **Wetlands** created by the construction of ponds in upland areas.
- 7. Either the **District** or an **authorized municipality** shall verify all onsite **isolated wetland** determinations and delineations.
- 8. The **co-permittee** shall provide an assessment of any identified **isolated wetland** and classify it as either a **high quality isolated wetland** or a **standard isolated wetland** using the criteria described below. Either the **District** or an **authorized municipality** will make the final determination of **wetland** status. A **high quality isolated wetland** satisfies any one of the criteria listed below. An **isolated wetland** that does not meet any of the following criteria can be classified as a **standard isolated wetland**. The criteria to receive a **high quality isolated wetland** status are as follows:
 - A. It has a **Swink and Wilhelm Floristic Quality Index (FQI)** value greater than or equal to 20 during a single season assessment or a native mean C-value of 3.5 or higher as calculated by the Swink and Wilhelm methodology; or
 - B. It is known to possess a federal- or state-listed threatened or endangered species based upon consultation with the Illinois Department of Natural Resources (IDNR) and the United States Fish and Wildlife Service (USFWS).
- 9. **Wetland buffers** for **isolated wetlands** shall be determined according to the functions of the **wetland**. Minimum **isolated wetland buffer** widths shall be as follows and as summarized in Table 3 of this Article 6:

- A. Thirty feet from the boundary of **standard isolated wetlands** greater than or equal to one-tenth of an acre (0.10 acres) and less than one-half of an acre (0.5 acres) in area;
- B. Fifty feet from the boundary of **standard isolated wetlands** greater than or equal to one-half of an acre (0.5 acres) in area; or
- C. One-hundred feet from the boundary of **high quality isolated wetlands**.

Table 3. Wetland Buffer Determination for Isolated Wetlands				
Wetland Quality	Acreage	§603.9(A)	§603.9(B)	§603.9(C)
Standard Isolated Wetland	≥ 0.10 acres and < 0.50 acre	30 ft		
	≥ 0.50 acre		50 ft	
High Quality Isolated Wetland	No minimum			100 ft

10. The **Wetland Buffer** width for **isolated wetlands** may be varied to a minimum of the greater of one-half the required buffer width or 30 feet, upon approval of either the **District** or an **authorized municipality**.

§ 604. Requirements for Development Affecting the Function of Wetlands and Wetland Buffers

1. Requirements for **development** affecting the function of **wetlands** are summarized in Table 3 of this Article 6.

Table 4. Wetland Impact Matrix					
Wetland Type	Wetland Area	§604.2	§604.3	§604.4	§604.5
Corps Jurisdictional Wetland	Any	X			
Standard Isolated Wetland	<0.10 acre				X
	≥0.10 acre			X	
High Quality Isolated Wetland	Any		X		

2. **Development** that impacts onsite **Corps jurisdictional wetlands** shall be prohibited unless a permit for all regulated activities is obtained from the appropriate federal and state authorities.
3. **Development** that impacts onsite **high quality isolated wetlands** shall be prohibited unless documentation is submitted that demonstrates either of the following:
 - A. That the presence of **high quality isolated wetlands** precludes all economic use of the **site** and that no practicable alternative to **wetland** modification exists; or
 - B. That avoidance of **high quality isolated wetlands** would create a hazardous road condition and that no practicable alternative to **isolated wetland** modification exists.

Based upon a review of the submitted documentation and any other available resources, either the **District** or an **authorized municipality** will make the final determination as to whether the proposed **high quality isolated wetland** modification represents the least amount of **wetland impact** required to allow economic use of the **parcel** or to mitigate the road hazard; and a determination as to whether a permit should be granted.

4. **Development** that impacts onsite **standard isolated wetlands** that are equal to or greater than one-tenth of an acre (0.10 acres) in aggregate shall be prohibited unless documentation is submitted which demonstrates that no practicable alternative to **wetland** modification exists. Based upon a review of the submitted documentation and other available resources, either the **District** or an **authorized municipality** will make a determination as to whether the proposed **wetland** modifications will be permitted.
5. **Development** that impacts onsite **standard isolated wetlands** with a total acreage less than one-tenth of an acre (0.10 acres) in aggregate, including **contiguous Isolated Waters** less than one-tenth of an acre (0.10 acres), does not require documentation showing that no practicable alternatives to **wetland** modification exist and that the **development** meets the requirements of §605.
6. **Development** will be permitted only when the indirect environmental impacts to onsite and offsite **wetlands** can be sufficiently evaluated, minimized, and mitigated as specified in §604 and §605. The designed **hydrology** should be maintained as close to 100 percent of the existing **hydrology** as possible. An **indirect wetland impact** shall be assumed if the **development** activity causes the **wetland hydrology** to fall below 80 percent, or to exceed 150 percent, of the existing condition **storm event runoff** volume to the **wetland** for the 2-year, 24-hour **storm event**.
7. **Detention** is permissible in **standard isolated wetlands**. Detention is not permissible in **high quality isolated wetlands**. Detention is not permissible in **Corps jurisdictional wetlands** when prohibited by the **Corps**. When detention is provided in a **standard isolated wetland**:
 - A. The **wetland hydrology** should be maintained as close to 100 percent of the existing **hydrology** as possible;
 - B. The **wetland hydrology** shall not fall below 80 percent, nor exceed 150 percent, of the existing condition **storm event runoff** volume to the **wetland** up through the 2-year, **24-hour storm event**; and
 - C. The **Isolated wetlands** shall not be inundated with more than twelve inches of water longer than twenty four hours during **storm events** up to and including the 100-year, 24-hour **storm event**.
8. **Stormwater** outlets discharging into an **isolated wetland** will only be allowed provided that appropriate **water quality** and **erosion control practices** are implemented and that they discharge through proper energy dissipation and scour protection, such as a level spreader or vegetated swale.

9. Mitigation for **developments** that impact an **isolated wetland** shall provide for the replacement of the lost **wetland** environment according to Table 5 of this Article 6:

Table 5. Isolated Wetland Mitigation Requirement Ratios					
Wetland Quality	Area	§604.9(A)	§604.9(B)	§604.9(C)	§604.9(D)
Standard Isolated Wetland	<0.10 acre	None			
	≥0.10 acre		1.5:1		
High Quality Isolated Wetland	Any			3:1	
Impacts Prior to Issuance of Permit					3:1

- A. **Standard isolated wetlands** less than one-tenth of an acre (0.10 acres) in aggregate do not require mitigation;
 - B. **Standard isolated wetlands** greater than or equal to one-tenth of an acre (0.10 acres) in aggregate at a minimum ratio of one-and-one-half acre of creation for each acre impacted (1.5:1);
 - C. **High quality isolated wetlands** at a minimum ratio of three acres of creation for each acre impacted (3:1);
 - D. **Isolated wetland impacts** initiated after the effective date of this **Ordinance** and prior to issuance of a **Watershed Management Permit**, or other unauthorized impact to a **wetland** at a minimum ratio of three acres of creation for each acre impacted (3:1); and
 - E. The **District**, federal, and state, and local authorities may require a greater compensation ratio where unique **wetland** functions are threatened.
10. When **development** impacts an **isolated wetland**, mitigation of said impacts shall be accomplished through one or more of the following options:
- A. Payment into a **Corps** approved **wetland mitigation bank** within the same **Watershed Planning Area** as the impact;

- B. Payment into a **Corps** approved **wetland mitigation bank** that is closest to the **development** within the same **Corps** Watershed Service Area as the impact as shown on Appendix D;
 - C. Enhancement of an existing onsite **isolated wetland** from a **standard isolated wetland** to a **high quality isolated wetland**, subject to §604.14 ;
 - D. Expansion of an existing onsite **isolated wetland**;
 - E. Onsite **wetland mitigation**; and
 - F. Offsite **wetland mitigation** within the same **Watershed Planning Area** as the impact.
- 11. **Wetland mitigation** for impacts to **Corps jurisdictional wetlands** shall not be credited toward **wetland mitigation** for impacts to **isolated wetlands**.
 - 12. Mitigated **isolated wetlands** shall be designed to duplicate or improve the hydrologic, biologic, and economic features of the original **isolated wetland**.
 - 13. Creation of **wetlands** for the mitigation of **development** impacts, within or affecting a **wetland**, may take place only within areas that are not currently **wetlands** and where there is reasonable expectation that **wetland mitigation** will succeed.
 - 14. Either the **District** or an **authorized municipality** may allow an existing **isolated wetland** that is **contiguous** to a proposed **isolated wetland mitigation site** to be enhanced in quality from a **standard isolated wetland** to a **high quality isolated wetland** in exchange for a partial reduction in the mitigation area required. In no case shall there be a loss of **wetland** function. Either the **District** or an **authorized municipality** may reduce the total **wetland mitigation** area required by 0.75 acres for every one acre of such **wetland** enhancement; however, the area of creation of new **wetlands** to compensate for unavoidable **wetland** loss shall not be allowed to fall below a ratio of one acre of creation for each acre impacted (1:1).
 - 15. An **isolated wetland mitigation** plan shall be developed by the **co-permittee**. This plan shall include design, construction, monitoring, and **maintenance** of the mitigation measures and shall meet the requirements of Article 9.
 - 16. **Development** in or affecting an **isolated wetland** shall be initiated only after the mitigation plan has been approved by either the **District** or an **authorized municipality**.
 - 17. The design, analysis, and construction of all **wetland mitigation** shall comply with all applicable federal, state, and local regulations.

18. Either the **District** or an **authorized municipality** will require that the **co-permittee** provide annual monitoring reports on the status of the constructed mitigation measures for five years, or until such time that the performance criteria has been met. Either the **District** or an **authorized municipality** may also require the **co-permittee** to undertake remedial action to bring the area into compliance with the mitigation plan.
19. **Development** within an **isolated wetland buffer** shall not, without mitigation:
 - A. Adversely change the quantity, quality, or temporal and areal distribution of flows entering any adjacent **wetlands** or waters;
 - B. Adversely affect any **groundwater** infiltration functions; or
 - C. Destroy or damage vegetation that stabilizes **wetland** fringe areas or provides overland flow filtration to **wetlands**. The removal of invasive vegetation is not considered to be destruction or damage of vegetation.
20. Impacts to **buffer** areas shall be mitigated through the replacement or enhancement of impacted functions.

§ 605. Wetland Banking

1. **Isolated wetland mitigation** provided through a **wetland mitigation bank** shall abide by the following hierarchy unless the method is not available, or unless the next method is justified through avoidance and minimization sequencing:
 - A. Payment into a **Corps** approved **wetland mitigation bank** in the same **watershed planning area**; or
 - B. Payment into a **Corps** approved **wetland mitigation bank** that is closest to the **development** within the same **Corps** Watershed Service Area as the impact as shown on Appendix D.
2. The payment amount made into a **wetland mitigation bank** will be determined by multiplying the acres of required mitigation by the appropriate banking cost.
3. **Wetland mitigation bank** credits applied toward impacts to **Corps jurisdictional wetlands** may not be applied simultaneously to mitigate impacts to **isolated wetlands**.
4. **Wetland mitigation banks** shall be approved by the **Corps**.

§ 606. Riparian Environments Requirements

1. **Riparian environments** may provide the following functions:
 - A. Reduce **flood** flow rates, velocities, and volumes;
 - B. Prevent **erosion** and promote bank stability of streams, **lakes**, ponds, or **wetland** shorelines;
 - C. Control **sediment** from upland areas, reducing the impact of urbanization on stream habitat and water quality by filtering and assimilating nutrients discharged from surrounding uplands;
 - D. Insulate and moderate daily and seasonal stream temperature fluctuations by maintaining cooler in-stream temperatures for areas with overhanging vegetation;
 - E. Serve as important areas for de-nitrification which reduces growth of algal blooms and subsequent depressed levels of dissolved oxygen in-stream;
 - F. Provide an effective mechanism for treatment of contaminated surface **runoff**; and
 - G. Provide habitat corridors for both aquatic and terrestrial fauna and flora.

2. Any **developments** involving **riparian environments** shall identify the boundaries of those **riparian environments** by using the following documents or procedures at the time of the **development** and which are summarized in Table 6 of this Article 6:

Table 6. Riparian Environment Determination				
Biological Stream Characterization	Waters Classification	§606.2 (A)	§606.2 (B)	§606.2 (C) or (D)
All Other Streams	Jurisdictional Water of the U.S.	<i>50 feet from the OHWM</i>		
	Isolated Waters		<i>30 feet from the OHWM</i>	
BSC of "A" or "B" or BSS Streams	Jurisdictional Water of the U.S.			<i>100 feet from the OHWM</i>
	Isolated Waters			<i>100 feet from the OHWM</i>

- A. For any **Jurisdictional Waters of the U.S.** that does not qualify as **wetlands**, the **riparian environment** shall be 50 feet from the **OHWM**.
- B. For any **Isolated Waters** that does not qualify as **wetlands**, the **riparian environment** shall be 30 feet from the **OHWM**.
- C. For any **Jurisdictional Waters of the U.S.** or for any **Isolated Waters** that do not qualify as **wetlands**, and which have a **BSC** of "A" or "B", the **riparian environment** shall be 100 feet from the **OHWM**.
- D. For any **Jurisdictional Waters of the U.S.** or **Isolated Waters** that do not qualify as **wetlands** identified as a **BSS**, the **riparian environment** shall be 100 feet from the **OHWM**.
3. The following **Isolated Waters** are not considered to be **riparian environments** and shall be exempt from the **riparian environment** requirements of this **Ordinance**:
- A. Roadside ditches created by excavation for the purposes of **stormwater** conveyance;
- B. Channels or bodies of water created by unfinished **development** activities; or

- C. Channels or bodies of water created by the construction of **stormwater facilities** for the purposes of **stormwater** management.

§ 607. Requirements for Development That Affect the Function of Riparian Environments

1. **Development** that impacts **Jurisdictional Waters of the U.S.** on the **development site** shall be prohibited unless a permit for all regulated activities is obtained from the appropriate federal and state authorities.
2. To the extent practicable, the existing functions of a **riparian environment** as defined by §606.1 shall be protected.
3. Adverse impacts to **riparian environment** functions shall be defined as:
 - A. Modification or relocation of streams and channels;
 - B. Changes to quantity, quality, or distribution of flows draining to any adjacent **wetlands** or waters; or
 - C. Damage to vegetation that overhangs, stabilizes, and provides overland flow filtration, or shades stream channels, **wetlands**, or impoundments that normally contain water. The removal of invasive vegetation is not considered to be destruction or damage of vegetation. The removal of vegetation and downed trees impeding drainage is not considered to be damage to vegetation when included as part of a **District** recognized program or project for stream **maintenance**, or **stabilization**, restoration, or enhancement.
4. Adverse impacts to the existing functions of a **riparian environment** shall be mitigated and a mitigation plan shall be prepared.
5. The following requirements pertain to channel relocation and **stabilization** practices:
 - A. When practicable, impacts to natural streams and channels should be avoided;
 - B. If a channel is completely or partially relocated, the newly created portion shall be constructed in a manner which will allow naturalizing to occur including, but not limited to, meandering, pools, or riffles;
 - C. New or relocated channels shall be built under dry conditions through the diversion of the normal flow within the channel. All items of construction (including establishment of vegetation) shall be completed prior to diversion of water into the new channel;

- D. If a channel is modified, an approved and effective **erosion and sediment control practice** to minimize and control suspended **sediment** and degradation of downstream water quality must be installed before excavation begins. The installed means must be maintained throughout the construction period and conform to the requirements of Article 4;
 - E. The length of any new or relocated channel shall be greater than or equal to the length of the disturbed channel;
 - F. Any channel modifications shall meet all other requirements in the **Ordinance**, including the **floodplain** and **floodway** requirements described in §601 and §602;
 - G. The **co-permittee** shall provide a plan and profile of the existing and proposed channel and supporting calculations for the channel width, depth, sinuosity, and riffle locations. Impacts on **flood** flows and **flood** elevations shall be evaluated using appropriate hydrologic and hydraulic methods;
 - H. Streams and channels shall be expected to withstand all events up to the **base flood** without increased **erosion**. Hard armoring of banks with concrete, bulkheads, riprap, and other non-natural materials shall be avoided where practicable. Hard armoring shall be used only where **erosion** cannot be prevented by use of bioengineering techniques or gradual slopes. Such armoring shall not have any adverse impact on other properties, nor shall it have an adverse impact upon the existing land use; and
 - I. All **disturbed areas** must be replanted for stability with native vegetation where appropriate. The **TGM** provides examples of native vegetation that is appropriate in **riparian environments**.
- 6. Re-vegetation of **disturbed areas** within **riparian environments** shall take place as soon as possible. In accordance with §404.1, **stabilization** practices shall be initiated as soon as practicable in portions of the **site** where construction activities have temporarily or permanently ceased.
 - 7. **Stormwater** outlets discharging into a channel will only be allowed provided that appropriate **volume control practices** are implemented and that they discharge through proper energy dissipation, such as a level spreader or vegetated swale.
 - 8. A riparian mitigation plan in accordance with §307 and §308.7 shall be developed. Mitigation of **riparian environment** impacts shall include design, construction, and continued monitoring and **maintenance** of the mitigation measures and shall meet the requirements of Article 9.

9. The design, analysis, and construction of all **riparian environment** mitigation measures shall comply with all applicable federal, state, and local regulations.
10. **Development** in or affecting a **riparian environment** shall be initiated only after a mitigation plan has been approved by either the **District** or an **authorized municipality**.
11. Either the **District** or an **authorized municipality** will require that the **co-permittee** provide annual reports monitoring the status of the constructed mitigation measures for five years, or until such time that the performance criteria has been met. Either the **District** or an **authorized municipality** may also require the **co-permittee** undertake remedial action to bring the area into compliance with the mitigation plan.

§ 608. Requirements for Outfalls

1. All new and reconstructed outfalls to any **waterways** within **Cook County**, including Lake Michigan and within the City of Chicago, require a **watershed management permit**.
1. All new and reconstructed outfalls must provide an appropriate energy dissipation **structure**. Outfalls constructed within **riparian environments** will be subject to the requirements of §607.
2. Neither **erosion** nor downstream **flooding** shall result from discharge from a new or reconstructed **outfall**. In accordance with Article 4, **stabilization** practices shall be initiated as soon as practicable in portions of the **site** where construction activities have temporarily or permanently ceased.
3. All new and reconstructed outfalls within **Cook County** shall comply with the details, technical requirements, and design guidelines contained in the **TGM**.

ARTICLE 7. REQUIREMENTS FOR SEWER CONSTRUCTION

§ 700. General Sewer Construction Requirements

1. The intent of Article 7 of this **Ordinance** is to supersede requirements of the repealed **Sewer Permit Ordinance** and the **Manual of Procedures**, as described in §104, as these prior ordinances related to the regulation, permitting and enforcement of **qualified sewer construction**.
2. All **qualified sewer construction** shall meet the requirements specified under Article 7.
3. A **watershed management permit** is required for **qualified sewer construction**.
4. A **watershed management permit** is not required for **non-qualified sewer construction**.
5. **Qualified sewer construction:** All public and private new sewers and new sewer connections, exterior to a **building envelope**, including sewer repair and sewer replacement. **Qualified sewer construction** includes any of the following:
 - A. New and replacement sewers including:
 - (1) **Sanitary sewer** (public and private);
 - (2) **Sanitary service sewer** (exterior to **building envelope**);
 - (3) **Combined sewer**;
 - (4) **Storm sewer** tributary to a **combined sewer** and/or a **District** collection or **water reclamation facility**;
 - (5) Force main conveying any flows from sewer listed above;
 - (6) Repair of an existing sewer listed above;
 - (7) Reinstatement of an existing unpermitted sewer as listed above; and
 - (8) Cured-In-Place-Pipe-Lining (CIPP) of existing public sewers
 - B. New and replacement sewer connections including:
 - (1) **Building** connections at the **building envelope**;
 - (2) Public sewer connections in the **right-of-way**;

- (3) Direct connections to **District** interceptors or interceptor **structures**, including within the City of Chicago;
 - (4) Direct connections to **District TARP structures** or tunnels, including within the City of Chicago;
 - (5) Direct connections to **District** owned reservoir, property or facility (pump stations, **water reclamation facility**, etc.), including within the City of Chicago; and
 - (6) **Outfalls** to **waterways** or Lake Michigan, including within the City of Chicago.
6. **Non-qualified sewer construction** includes any of the following:
- A. Private **single-family home** (less than three (3) units) **service sewer**;
 - B. Plumbing internal to any **building envelope**;
 - C. **Storm sewer** tributary to a **waterway** in **separate sewer areas**;
 - D. Septic system sewers;
 - E. Sewers and sewer connections constructed outside of **District** corporate limits or service agreement areas, at the time of permit application;
 - F. Private grey water, reclamation, or water harvesting sewers and associated connections not tributary to **District water reclamation facilities**; and
 - G. **Structure** footing drains.
7. **Sewer maintenance** is considered **non-qualified sewer construction** and includes any of the following:
- A. Cured-In-Place-Pipe-Lining (CIPP) of existing previously permitted private sewers;
 - B. Grouting of existing sewers; and
 - C. Jetting and cleaning of existing sewers.
8. Any **qualified sewer construction** planned in conjunction with general **site development** shall also meet the requirements specified under Article 4, Article 5, and Article 6 where applicable.

9. All **permittees** and **co-permittees** shall submit the documents specified in §307 to verify compliance with the requirements in Article 7.
10. Design and performance standards of all **qualified sewer construction** shall be consistent with the **TGM**.
11. **Qualified sewer construction** installed under the provisions of this **Ordinance** shall be maintained according to the criteria and guidelines established in Article 9.
12. **Qualified sewer construction** shall be designed to comply with all Federal, State, and local laws and engineering standards pertaining to sewer construction, including but not limited to:
 - A. The **District's Sewage and Waste Control Ordinance**;
 - B. Title 35 of the Illinois Administrative Code;
 - C. **Illinois Pollution Control Board** Technical Releases and other applicable rules and regulations issued;
 - D. **Illinois Recommended Standards for Sewage Works**;
 - E. **Standard Specifications for Water & Sewer Construction in Illinois**; and
 - F. **Recommended Standards for Wastewater Facilities**.
13. The **District** may enter into service agreements with **municipalities** that are **contiguous** to the corporate limits of the **District**. The **District** may also enter into service agreements with **municipalities** to provide an outlet for **sanitary sewer** service to areas in an adjoining county, as long as the **municipality** is partly within the corporate limits of the **District**. When the area to be served by the Service Agreement is not within the corporate limits, the terms and conditions of Article 7 apply to the area to be served.

§ 701. Qualified Sewer Construction Requirements

1. **Qualified sewer construction** shall not:
 - A. Pollute public potable water supply systems (water mains);
 - B. Pollute **waterways**, water bodies or **groundwater**;
 - C. Discharge sanitary **sewage** without treatment:
 - (1) Into a **storm sewer** system in a **separate sewer area**;
 - (2) Onto the ground; or
 - (3) Into a receiving **waterway**;
 - D. Convey **industrial wastes** that qualify for pre-treatment;
 - E. Drain clean clear **groundwater** into a collection system tributary to a **water reclamation facilities**;
 - F. Increase **basement** backups, **sanitary sewer** overflows, or **combined sewer** overflows by disproportionally decreasing **sewage** capacity within the existing **sanitary sewer** system and/or **combined sewer** system;
 - G. Allow excessive infiltration and inflow into a collection system tributary to **water reclamation facilities**;
 - H. Allow **stormwater** to enter **sanitary sewer** systems in **separate sewer areas**;
 - I. Combine **storm sewer** flow with **sanitary sewage** within a **parcel** (including within **Combined Sewer Areas**). Complete separation of sewers shall be provided within a **parcel**, and **sewage** may only be combined at the property line, immediately prior to the public **combined sewer** main connection; and.
 - J. Violate any provision of this **Ordinance** either during or after construction.
2. **Qualified sewer construction** requirements by project type:
 - A. **Single-Family Home**
 - (1) Private single-family residential **service sewer** (less than three (3) units) is exempt from these **Ordinance** requirements, provided that:
 - (a) An extension of public **qualified sewer construction** is not required to obtain service access; and

(b) Wastes consist of domestic **sewage** only.

(2) Single family residential **service sewer** shall not run:

(a) Parallel to the **right-of-way**; or

(b) Extend beyond the ends of the **right-of-way** frontage.

B. Residential Subdivision

(1) Any public **qualified sewer construction** within a **development** requires a **watershed management permit**.

(2) An application submittal for a **watershed management permit** shall include a plan and profile of all public sewers.

(3) Each residential single-family **service sewer** meeting conditions specified under §701.2.A(1) can be considered exempt from these requirements.

(4) Refer to Table 2 in Article 5 to determine **site stormwater** management requirements.

C. Multi-Family Residential Sewer

(1) Residential **service sewer** for a **building** with three (3) units or more requires a **watershed management permit**.

(2) A **multi-family residential service sewer** requires an inspection manhole prior to the public **right-of-way**. The appropriate **District** inspection manhole detail is available from the **TGM** and shall be provide on the plans.

(3) Refer to Table 2 in Article 5 to determine **site stormwater** management requirements.

D. Non-Residential Service Sewer

(1) **Non-residential service sewer** requires a **watershed management permit**.

(2) All **non-residential service sewer** requires an inspection manhole prior to the public **right-of-way**. The appropriate **District** inspection manhole detail is available from the **TGM** and shall be provide on the plans.

(3) Refer to Table 2 in Article 5 to determine **site stormwater** management requirements.

- (4) **Objectionable Wastes.** When the use of a **non-residential building** is such that it will produce objectionable wastes or heavily-loaded discharges, (e.g. auto service, garage, car wash, etc.), the **co-permittee** shall comply with all of the following requirements:
 - (a) Provide a triple basin, or similar settling structure, to treat all non-domestic flow, prior to discharging into the sewer main;
 - (b) Regularly scheduled **maintenance** shall be done to remove and properly dispose of all collected objectionable wastes; and
 - (c) Provide a detail of the triple basin (or settling structure) on the plans.
- (5) **Fats, Oils and Grease.** When the use of a **non-residential building** is such that Fats, Oils, and Grease are expected to be produced and discharged (e.g. restaurants), the **co-permittee** shall comply with all of the following requirements:
 - (a) Provide a grease separator, or similar device, to treat all non-domestic flow, except the discharge from an automatic dishwasher, prior to discharging to the sewer main;
 - (b) Regularly scheduled **maintenance** shall be done to remove and properly dispose of all collected Fats, Oils, and Grease; and
 - (c) Provide a detail of the grease separator on the plans.
- (6) **Industrial Waste Potential.** When the use of a **non-residential building** does not involve processes or operations that will produce **industrial wastes** (e.g. warehouse), the **co-permittee** shall:
 - (a) Provide a statement on the **owner's** letterhead describing the use of the **building**; and
 - (b) Certify that no **industrial waste** will be allowed to discharge into the sewer system.
- (7) **Industrial Waste Present.** When the use of a **non-residential building** involves processes or operations that will produce **industrial wastes** (e.g. chemical plating, industrial food processing, etc.), the **co-permittee** shall submit:
 - (a) Complete additional appropriate permit forms for effluent characteristics of wastes;

- (b) Complete additional appropriate permit forms for documentation of the onsite treatment / pre-treatment facilities planned;
- (c) Submit a statement on the **owner's** letterhead describing the use of the **building** and the processes used;
- (d) Indicate the quantity, character, and quality of **industrial wastes**, including but not limited to 5-day BOD, pH, and suspended solids;
- (e) Indicate the type and location of proposed treatment facilities proposed;
- (f) Indicate the expected quality of the effluent;
- (g) Indicate the method of controlling the quantity of discharge into the public sewer;
- (h) Indicate the times of discharge; and
- (i) Indicate **other wastes** created but not discharged into the sewer and the method of disposal of same.

E. **Public Lift Station / Force Main**

- (1) Gravity sewers shall be used whenever practicable. Lift stations and force mains may only be used after all other alternatives have been exhausted.
- (2) Lift station pumping capacity shall be designed and justified on the basis of actual flows expected from the population to be served at the time of permit **development**, or from actual flow monitoring data.
 - (a) Additional pumping capacity accommodations may be made for reasonable future build-out of undeveloped / underdeveloped areas within the tributary sewer shed. In such situations, a future service area exhibit and flow estimate must be provided to justify final lift station capacity.
 - (b) Unjustified excessive lift station capacity is strictly prohibited.
- (3) Discharge of force mains directly into another lift station is discouraged and is only allowed when it is impracticable to discharge into a gravity sewer. Where a force main or a lift system is designed to discharge into another lift station, a detailed report is required to justify such design and shall include:

- (a) Other methods are considered and exhausted;
 - (b) A written recommendation of the design supported by engineering considerations;
 - (c) Written approval of the **owner** of the receiving lift station acknowledging the risks and the need for additional **maintenance**; and
 - (d) A **maintenance** and operation agreement between the **co-permittee** and **owner** specifying the responsibilities of each in case of failure of either lift station.
- (4) Complete additional appropriate permit forms for documentation of lift station design and capacity.

F. District Interceptor, TARP and other Direct Connections to District Facilities

- (1) Direct connections to **District** facilities require a **watershed management permit**. This includes all **District** facilities located within the limits City of Chicago.
- (2) Refer to §700.5.B.(5) for a list of **District** facilities requiring a permit for direct connection.
- (3) Preliminary coordination with the **District** is recommended prior to submitting a permit for proposed connections to **District** facilities. The co-applicant shall formally petition the **Director of Engineering** in writing to schedule a coordination meeting.
- (4) Written approval from the **District** shall be obtained prior to entering any **District** facilities (including **TARP** and interceptor manholes).
- (5) The appropriate **District** direct connection details, specification for connection, and proper construction requirements are available from the **TGM** and shall be provided on the plans.
- (6) Complete additional appropriate permit forms for documentation of direct connections to **District** Facilities.

G. Outfall Connections

- (1) All new and reconstructed **outfalls** to **waterways** and Lake Michigan within **Cook County**, including the City of Chicago, require a **watershed management permit**.

- (2) New and reconstructed **outfalls** shall comply with the requirements of §608 of this **Ordinance**.
- (3) Complete additional appropriate permit forms for documentation of **outfall** connections.

H. **Treatment Facilities**

- (1) Treatment facilities include, but are not limited to, treatment processes, private treatment plants, oxidation ponds, and similar facilities.
- (2) The **co-permittee** shall consult with the **District** during the design of private treatment facilities.

I. **Septic Systems**

- (1) The **District** does not regulate the design, construction, or **maintenance** of septic systems for **sewage** disposal serving a **single-family home** or **building**. When proposing septic systems, the **co-permittee** shall obtain permits from all relevant local and state authorities.
- (2) Septic systems shall not discharge effluent to a sewer tributary to the **District's** interceptors or **water reclamation facilities**.
- (3) When septic systems are disconnected and a sanitary service connection is made, existing septic systems shall be removed or abandoned by completely filling the tank with granular material. Connections and piping to the new **sanitary sewer** system shall be watertight and made upstream of the septic tank. All existing septic system and tank connections to be abandoned shall be plugged with non-shrink mortar or cement.
- (4) **Non-residential** projects on septic systems or private treatment plant systems that propose connection to a **sanitary sewer** system shall provide **stormwater** detention for all existing and proposed **development** in accordance with Article 5 of this **Ordinance**.

J. **Sewer Construction in Floodplain**

- (1) All proposed sanitary **structures** shall have above ground openings located above the **FPE** or shall be constructed with lock-type, watertight **structure** lids. Refer to Article 6 for further requirements regarding **development** within **flood protection areas**.

- (2) Lift station facilities (including mechanical and electrical equipment)
 - (a) Existing lift station facilities to be repaired or rehabilitated shall have all above ground equipment elevated above the **FPE**. Where possible, ground openings shall be adjusted above the **FPE** or be constructed with lock-type, watertight **structure** lids to protect against the **base flood**.
 - (b) New lift station facilities shall be located above the **FPE** and outside the limits of the **regulatory floodplain**. New lift stations facilities shall also be carefully located to ensure **maintenance** access at all times during the **base flood**.

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ARTICLE 8. RESERVED

§ 800. Reserved

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ARTICLE 9. MAINTENANCE

§ 900. General Maintenance Requirements

1. A **maintenance** plan shall be required under a **watershed management permit** to provide for the perpetual **maintenance** of all of the following systems as required by §308:
 - A. **Erosion and sediment control practices;**
 - B. **Stormwater detention facilities;**
 - C. **Stormwater** collection facilities including both **major** and **minor stormwater systems;**
 - D. Volume control facilities;
 - E. **Native planting conservation areas;**
 - F. **Qualified Sewer Construction** including service on grease basins, triple basins, and private pre-treatment facilities;
 - G. **Wetland mitigation;** and
 - H. **Riparian environment** mitigation.
2. The **maintenance** plan provisions shall describe inspection, **maintenance**, and monitoring activities that occur after the construction phase and continue into perpetuity.
3. Guidance on inspection, **maintenance**, and monitoring is provided in the **TGM**.
4. **Maintenance** is the responsibility of the **co-permittee** and **permittee** of the **development**. The **co-permittee** and **permittee** may delegate **maintenance** responsibility to an entity acceptable to the **permittee**; however, ultimate responsibility for **maintenance** of the facilities listed under §900.1, lies with the **permittee**.
5. Any amendment to the **maintenance** plan shall be submitted to and approved by the MWRDGC, **Director of Engineering**.

§ 901. Qualified Sewer Operation and Maintenance

1. Constructed sewer facilities must be permanently operated and maintained by the **permittee** and **co-permittee in** accordance with the issued **watershed management permit** and special conditions.
2. Qualified sewer facilities shall not be modified, extended, replaced, eliminated or abandoned without written permission from the **District's Director of Engineering**.
3. It shall be the duty and responsibility of every **permittee** to whom a **watershed management permit** has been issued for the construction and operation of any facility or connection under Article 7 of this **Ordinance to** keep said facility or connection in a proper state of repair and **maintenance** after same has been completed and placed in operation.
4. No permits shall be issued for the construction, extension, operation and **maintenance** of private **sewage** treatment plants, oxidation ponds or other treatment facilities unless accompanied by a bond with sufficient surety for proper construction, extension, operation and **maintenance** of any such treatment plant, oxidation pond, or other **sewage** treatment facility within the corporate limit boundaries of the **District**. The bond shall conform to all of the following requirements:
 - A. The bond shall terminate upon connection of said **sewage** treatment plant, oxidation pond, or other **sewage** treatment facility to an intercepting sewer, or treatment plant of the **District**;
 - B. The bond shall be a condition for issuing a **watershed management permit**;
 - C. The **co-permittee** shall provide any additional security required by the **Director of Engineering** for the life of the permit, to guarantee full and complete performance, including the execution of any and all documents that may be required in support thereof;
 - D. The form and legality of the bond must be approved by the Law Department of the **District**; and
 - E. The engineering details of the bond must be approved by the **Director of Engineering**.

ARTICLE 10. INSPECTIONS

§ 1000. General

1. The **District** may periodically inspect any **development** activity or **qualified sewer construction** under the **District's** scope of regulation as outlined in §200.
2. The **District** may periodically inspect any **development** activity or **qualified sewer construction** requiring a **watershed management permit** in §201.
3. An **authorized municipality** shall periodically inspect any **development** activity requiring a **watershed management permit** in §201.1.
4. Inspections shall verify compliance with this **Ordinance** and issued **watershed management permits**. Typical inspections may occur on the following milestones:
 - A. After mobilization and installation of initial **erosion and sediment control practices**, prior to any soil disturbance;
 - B. During excavation for the construction of **qualified sewer construction, major stormwater systems** and **detention facilities**;
 - C. Completion of the **development** or **qualified sewer construction**.
5. The **District** may enter upon any **development** subject to this **Ordinance** to conduct inspections as outlined in §205.1.

§ 1001. Inspection Requirements to be met by Development

1. Prior to commencement of construction under a **watershed management permit**, the **co-permittee** shall give, or cause to be given, to the **District** or relevant **authorized municipality**, an advance notice of at least two (2) working days of the milestones described in §1000.4.
2. All construction shall be in accordance with the plans and specifications made part of a **watershed management permit**. The **watershed management permit** together with a set of the plans and specifications for the project shall be kept on the job site at all times during construction, until final inspection and approval by the **District** or relevant **authorized municipality**
3. All construction shall be inspected and approved by a **Professional Engineer** acting on behalf of the **permittee** or the **owner** of the project, or by the duly authorized representative of the **Professional Engineer**

4. No sewer trenches or **major stormwater systems** shall be backfilled except as authorized by the Inspection Engineer and the **District** Inspector after having inspected and approved the sewer installation.
5. Construction records may be inspected at any time during the project to demonstrate ongoing compliance with this **Ordinance** and any issued **watershed management permits**. Such records may include, but are not limited to:
 - A. The stormwater pollution prevention plan with associated inspection reports;
 - B. A copy of the latest revised construction drawings;
 - C. The project construction schedule;
 - D. Project construction photography; and
 - E. Copies of other federal, state, and local permits.
6. Construction without advance notice to the **District** or relevant **authorized municipality**, as provided in §1001.1, shall be assumed to not be in compliance with the applicable **Ordinance** requirements. In addition to any other requirements, that portion of the newer construction prior to the notification of the **District** shall be exposed by the owner, at his expense in at least one location between every two manholes, two terminal points or as directed by the **District** for visual inspection by the **District** to insure compliance with applicable requirements as to materials and workmanship.

§ 1002. Special Requirements for Qualified Sewer Construction

1. In addition to the inspection requirements of §1001, the requirements of this section shall apply to **qualified sewer construction**.
2. **Testing** - All sewers constructed under the **permit** issued by the **District** shall be subject to inspection, testing and approval by the **District** to insure compliance with the **Ordinance**. All testing shall be made, or caused to be made, by the **permittee** or **co-permittee** at no cost to the **District** and in the presence of the **District** inspector or representative.
3. **Backfilling** - No sewer trenches shall be backfilled except as authorized by the **District** inspector after having inspected and approved the sewer installation. The inspector shall signify his approval and authorization for backfilling on the Inspection Report. The Inspection Report shall be on the job site at all times, and shall bear the signature of the Engineer, identifying those portions of the sewer inspected and approved by him. The Inspection Report shall be made available for review by the **District** representative.

§ 1003. Request for Final Inspection

1. Prior to completion of construction, the **permittee** shall submit to the **District** a properly executed Request for Final Inspection and approval on the form prescribed by the **District**.
2. The **co-permittee** shall provide the **District** inspector an advance notice of at least two (2) working days prior to final inspection.
3. No sewer shall be put in service until it has been approved by the **District**, and until all the conditions of the **watershed management permit** are satisfied.
4. Record Drawings. Prior to final inspection and approval by the **District**, the **permittee** or **co-permittee** shall furnish or cause to be furnished to the **District**, a set of record drawings.
5. Recordation. Prior to final inspection and approval, the **co-permittee** shall provide a copy of the recorded documents described under §308.9 and §309. In the event the co-permittee does not provide a copy of the recorded documents described under §308.9 and §309, the **District** may record such document at the cost of the **co-permittee**.

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ARTICLE 11. VARIANCES

§ 1100. Authority

1. Only the **District** may grant **variances** from the requirements of this **Ordinance** as set forth herein. An **authorized municipality** shall not grant **variances** from the requirements of this **Ordinance**.
2. The **variance** procedure is intended to provide a narrowly circumscribed means by which relief may be granted from the requirements of this **Ordinance**.

§ 1101. Petition for Variance

1. A request for a **variance** shall be filed as a petition by the **co-permittee** and shall be filed with the Clerk of the District, at 100 East Erie Street, Chicago, Illinois 60611.
2. At the time of filling the petition, the **co-permittee** shall pay a variance filing fee. Permit fees, including variance filing fees, will be establish by the **District** under separate ordinance.
3. All **variance** petitions shall contain the following information including, but not limited to:
 - A. The **co-permittee's** notarized signature on the petition;
 - B. A letter of no objection to the **variance** request from the **permittee** or local unit of government in unincorporated areas in which the **development** is located;
 - C. The names and addresses of all professional consultants advising the **co-permittee** regarding the petition;
 - D. The address(es) and legal description of the **site**;
 - E. The names and address(es) of all owners of record within two-hundred fifty (250) feet of the **site**;
 - F. The specific feature(s) of the proposed **development** that requires a **variance**;
 - G. The specific provision(s) of this **Ordinance** from which a **variance** is being requested and the precise variation being sought;
 - H. A detailed statement of the characteristics of the **development** that prevent it from complying with this **Ordinance**;

- I. A detailed statement of the minimum **variance** from the provisions of this **Ordinance** that would be necessary to permit the proposed construction or **development**; and
- J. A detailed statement of how the submitted **variance** application satisfies each of the criteria provided in §1103.1.

§ 1102. Co-Permittee's Notice of Petition

- 1. Within seven (7) calendar days after the petition for **variance** is filed with the Clerk of the District, the **co-permittee** shall publish at least one notice of such petition in a newspaper that is published in **Cook County** with a general circulation in the vicinity of the **site** of the proposed **development** for which a **variance** is requested.
- 2. Within seven (7) calendar days after the petition for **variance** is filed with the Clerk of the District, the **co-permittee** shall mail notice via certified mail, return receipt requested, of such petition to all owners of record located within two-hundred fifty (250) feet of the **site** of the proposed **development** for which a variance is requested, and to any other **persons** in the vicinity of the proposed **development** that the **co-permittee** has knowledge of or believes may potentially be affected by the requested **variance**.
- 3. Within seven (7) calendar days after the petition for **variance** is filed with the Clerk of the District, the **District** shall publish such petition for **variance** on its website.
- 4. All notices required by this section shall include the following:
 - A. The street address of the **development**, or if there is no street address, then the legal description and the location with reference to any well-known landmarks, highway, road or intersection;
 - B. A description of the requested **variance**;
 - C. A statement that any **person** may submit written comments regarding the petition for **variance** to the Clerk of the District within twenty-one (21) calendar days after the publication and mailing of notice; The notice shall include mailing information for said comments as follows:

Metropolitan Water Reclamation District of Greater Chicago,
Clerk of the District, 100 East Erie Street, Chicago, Illinois 60611;
 - D. A statement that copies of the petition for **variance** are available upon request from the **co-permittee**;

- E. A statement that any and all documents that concern the petition for **variance**, which are subject to public disclosure, will be made available for inspection by the **co-permittee** at a readily accessible location; The notice will include the address where said inspection of documents will take place together with the name and telephone number of the **person** responsible for making the records available for inspection; and
 - F. Any additional information considered necessary or proper.
- 4. Within seven (7) calendar days after the publication of notice, the **co-permittee** shall submit to the Clerk of the District a certification of publication and shall attach a copy of the published notice.
 - 5. Within seven (7) calendar days after mailing of notice to owners of record as described in §1102.2, the **co-permittee** shall submit to the Clerk of the District a notarized affidavit listing the addresses to which notices were mailed and certifying to the completeness of the list to the best of the **co-permittee's** knowledge and belief.

§ 1103. Standards

- 1. The **District** may grant a **variance** when it is consistent with the general purpose and intent of this **Ordinance** and when the **development** meets the requirements as specified in §501.1 and all of the following conditions:
 - A. Granting the **variance** shall not alter the essential character of the area involved, including existing stream uses;
 - B. Failure to grant the **variance** would create an exceptional hardship on the **co-permittee**; economic hardship of the co-permittee alone shall not constitute exceptional hardship;
 - C. The relief requested is the minimum necessary and there are no means other than the requested **variance** by which the alleged hardship can be avoided or remedied to a degree sufficient to permit the reasonable continuation of the **development**;
 - D. The **co-permittee's** circumstances are unique and do not represent a general condition or problem;
 - E. The **development** is exceptional when compared to other **developments** that have met the provisions of this **Ordinance**;

- F. A **development** proposed within a **flood protection area** could not be constructed if it were located outside the **flood protection area**;
 - G. The **co-permittee's** circumstances are not self-imposed; and
 - H. Granting the **variance** shall not result in any increase **regulatory floodplain** elevation unless a **CLOMR** is issued by **FEMA**, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud or victimization of the public, or conflict with existing laws or ordinances.
- 2. The **District** shall not grant **variances** for any **development** that is within a **regulatory floodway, jurisdictional wetland, or Jurisdictional Water of the U.S.** unless such **variance** meets or exceeds federal and/or state required minimum standards for **development** in such areas. The **co-permittee** shall be responsible for obtaining all applicable federal and/or state permits before any such **variance** is granted.
 - 3. The **District** shall not grant **variances** that would violate the minimum standards for **floodplain** management established by the **OWR** and the requirements of the **FEMA** for participation in the **NFIP**.

§ 1104. Submission of Written Comments

- 1. Any **person** may submit written comments regarding the petition for **variance** to the Clerk of the District within twenty-one (21) calendar days after the publication and mailing of notice by the **co-permittee**.
- 2. Written comments should be mailed to: Metropolitan Water Reclamation District of Greater Chicago, Clerk of the District, 100 E. Erie Street, Chicago, Illinois 60611.
- 3. The **District** shall consider all written comments received regarding a petition for **variance**.

§ 1105. Determination by the District

- 1. After closure of the written comment period specified in §1104, and once all of the following items are received, the Clerk of the District shall forward the petition to the **Director of Engineering**
 - A. The petition for **variance**;
 - B. Copies of all notices; and
 - C. Copies of all written comments received.

2. The **Director of Engineering** shall review the petition for variance and prepare a report recommending one of the following alternatives, to include with the items listed under §1104, and forward to the **Board of Commissioners** for consideration:
 - A. Grant the petition for **variance**; or
 - B. Grant the petition for **variance** with conditions; or
 - C. Deny the petition for **variance**.
3. Within thirty (30) calendar days after the **Board of Commissioners'** receipt of the petition for **variance**, the **Board of Commissioners** shall review the petition for **variance** and determine whether the petition for **variance** shall be heard by the **Board of Commissioners** itself or by its designee in a **variance** hearing.
4. The Clerk of the District shall promptly notify the **co-permittee** in writing of the **Board of Commissioners'** determination of who shall hear the petition for **variance**.
5. The **Board of Commissioners** shall promulgate procedural rules that will govern hearings pursuant to this Article. All hearings conducted pursuant to this Article will also follow the requirements for show cause hearing as set forth in §1104.2 through §1104.5.
6. All **variance** hearings shall be concluded as soon as practicable.
7. When a **variance** hearing is conducted by the designee of the **Board of Commissioners**, at the conclusion of the hearing, the designated hearing officer shall submit the following:
 - A. A written report of findings to the **Board of Commissioners** with respect to the petition for **variance**; and
8. A complete record of the **variance** hearing if requested by either the **Board of Commissioners** or by the **co-permittee** at its own expense. The **Board of Commissioners** shall either approve or disapprove the report of the designated hearing officer. If the report is rejected, the **Board of Commissioners** shall remand the matter to the hearing officer for further proceedings. If the report is accepted by the **Board of Commissioners**, it shall constitute the final order of the **Board of Commissioners**.
9. The Clerk of the District shall notify the **permittee** and **co-permittee** of the determination of the **Board of Commissioners** by certified mail, return receipt

requested within thirty (30) calendar days of the **Board of Commissioners'** determination. A denial of a **variance** request shall specify the requirements and conditions of this **Ordinance** forming the basis of the denial.

10. The Clerk of the District shall notify all **persons** who submitted written comments of the determination of the **Board of Commissioners** by certified mail, return receipt requested within thirty (30) calendar days of the **Board of Commissioners'** determination.
11. The Administrative Review Law of the State of Illinois, and the rules adopted under such law, shall govern all proceedings for judicial review of final orders of the **Board of Commissioners** issued under this Section.

§ 1106. Conditions

1. The **District** may grant a **variance** that differs from the relief requested when supported by the record.
2. The **District** may impose specific conditions and limitations on the **development** receiving a **variance** as the **District** deems necessary to meet the intent of this **Ordinance**.
3. Whenever a **variance** is authorized with conditions and limitations, the **permittee** and **co-permittee** shall both file a notarized affidavit with the **District**, indicating acceptance of the conditions and limitations and their agreement to comply therewith.

ARTICLE 12. PROHIBITED ACTS, ENFORCEMENT, AND PENALTIES

§ 1200. Prohibited Acts

1. It shall be unlawful for any **person** to undertake any **development** within **Cook County** that requires a **watershed management permit** under this **Ordinance** without first securing a **watershed management permit**.
2. It shall be unlawful for any **person** to install **qualified sewer construction** within the **District's** corporate limits or service agreement areas that requires a **watershed management permit** under this **Ordinance** without first securing a **watershed management permit**.
3. It shall be unlawful for any **person** to fail to maintain systems, in whole or in part, as required:
 - A. Within a **watershed management permit**; and
 - B. Within the **maintenance** plan of the permit as required in §900.1.
4. It shall be unlawful for any **person** to violate, disobey, omit, fail to maintain, or refuse to comply with or to resist enforcement of any provision of this **Ordinance** or any condition of a **watershed management permit** required by this **Ordinance**.

§ 1201. Administrative Proceedings: Notice of Violation

1. Whenever it shall appear to the **Director of Engineering** that a violation of a provision of this **Ordinance** exists, the **Director of Engineering** shall, as soon as practical, issue a written **Notice of Violation (NOV)** to the **permittee / co-permittee**, and/or the **person** responsible for the apparent violation (**respondent**). The **NOV** shall advise the **respondent** of the nature of the noncompliance and shall require the **respondent** to investigate the alleged violation, determine remediation measures, and develop a schedule to correct the noncompliance. The **NOV** may be sent via Certified Mail, Return Receipt Requested, or may be served personally by a representative of the **District** at the **site**, on the **respondent** or its representative.
2. The **Director of Engineering** may request a conciliation meeting concurrent with the issuance of a **NOV** for the purpose of investigating the **NOV** and for establishing a compliance schedule. In the event a conciliation meeting is not requested by the **Director of Engineering**, the **respondent** may request a conciliation meeting within seven (7) calendar days of receipt of a **NOV**. The **Director of Engineering** shall use his best efforts to convene the conciliation meeting within forty-five (45) calendar days of issuance of the **NOV**. During conciliation proceedings, the **respondent** may be

required to furnish the **District** with such information as is reasonably necessary to demonstrate compliance with the **Ordinance** or with a **watershed management permit** issued thereunder. The **Director of Engineering** may continue the conciliation meeting from time to time as deemed necessary to further compliance with this **Ordinance**.

3. A **respondent** engaging in conciliation proceedings with respect to a **NOV** shall submit a **compliance report and schedule** to the **Director of Engineering** within thirty (30) calendar days after the conciliation meeting, or upon such further date as determined appropriate by the **Director of Engineering**. In the event no conciliation meeting is held, the **respondent** shall submit the **compliance report and schedule** within forty-five (45) calendar days after the receipt of the **NOV**. The **compliance report and schedule** shall be executed by the **respondent** or its authorized representative and shall be certified as to accuracy and completeness by a **Professional Engineer**. The **compliance report and schedule** shall include a schedule that establishes a final compliance date, representing a date certain upon which all violations and conditions contained in the **NOV** are remedied. Within twenty-one (21) calendar days after receipt of the **compliance report and schedule**, the **Director of Engineering** shall accept the **compliance report and schedule** as filed or shall request such further amendments to the **compliance report and schedule** as deemed necessary to insure compliance with the requirements of the **Ordinance** or **watershed management permit**.
4. Representatives of the **District** may, during reasonable hours, enter upon the **site** of any **development** subject to a **NOV** for purposes of inspecting the **development** that is the subject of the **NOV** and/or for verifying compliance with a **compliance report and schedule** submitted pursuant to §1201.3. Inspections shall be conducted in accordance with the provisions of this **Ordinance** concerning Right of Access as set forth in Article 2. An inspection fee of \$250.00 shall be charged by the **District** for each onsite inspection made by the **District** pursuant to this section.
5. No later than twenty-one (21) calendar days after the final compliance date, the **Director of Engineering** shall review the compliance status of the **respondent** and shall advise the **respondent** in writing whether **respondent** has adequately remedied the violation(s) contained in the **NOV**.
6. If it appears to the **Director of Engineering** that a **person** subject to a **NOV** has failed to respond within thirty (30) calendar days after service, or has failed to submit a **compliance report and schedule** acceptable to the **Director of Engineering**, or has failed to achieve compliance on or before the final compliance date, the **Director of Engineering** may at his discretion either issue an amendment to the **NOV** or make a Recommendation for Show Cause to the **Executive Director**.

7. Upon receipt of an **NOV**, the **respondent** shall cease all actions that are related to or in furtherance of the alleged noncompliant activity until such time as the **NOV** is finally resolved.

Table 7 Notice of Violation (NOV)			
Section	Action	By	When
1201.1	Issuance of NOV	Director of Engineering	Apparent violation of Ordinance or watershed management permit .
1201.3	Submission of compliance report and schedule	Respondent	Within 45 calendar days after issuance of NOV .
1201.5	Review of compliance report and schedule	Director of Engineering	Within 21 calendar days after receipt of compliance report and schedule .
1201.6	Issuance of amendment to NOV	Director of Engineering	Respondent: 1) Does not respond 30 calendar days after service, 2) Fails to submit an acceptable compliance report and schedule , or 3) Fails to achieve compliance on or before the final compliance date.
1201.6	Recommendation for Show Cause to Executive Director	Director of Engineering	Respondent: 1) Does not respond 30 calendar days after service, 2) Fails to submit an acceptable compliance report and schedule , or 3) Fails to achieve compliance on or before the final compliance date.

§ 1202. Administrative Proceedings: Proceedings for Show Cause Before the Board of Commissioners

1. Upon recommendation of the **Director of Engineering** as set forth in §1201.6, the **Executive Director** may order the **respondent** to appear before the **Board of Commissioners** or its duly designated representative and show cause why the **respondent** should not be found in violation of this **Ordinance**.
2. The **Board of Commissioners** shall promulgate procedural rules governing administrative proceedings pursuant to this Article.

§ 1203. Notice of Show Cause

1. Notice to the **respondent** shall specify the date, time and location of a hearing to be held by the **Board of Commissioners** or its designee. The notice of the hearing shall be served personally or by registered or certified mail at least ten (10) working days before said hearing. In the case of a **municipality** or a corporation, said service shall be upon an officer or agent thereof.

§ 1204. Show Cause Hearing and Imposition of Civil Penalties by Board of Commissioners

1. The **Board of Commissioners** or its designee may conduct a Show Cause hearing.
2. The **Board of Commissioners** shall establish a panel of independent hearing officers, from which a designee must be selected, to conduct all hearings not presided over by the **Board of Commissioners**. All hearing officers shall be attorneys licensed to practice law in the State of Illinois.
3. All hearings shall be on the record and any testimony taken at a hearing shall be under oath and recorded stenographically. The transcripts so recorded must be made available to any member of the public or to the **respondent** or party to such hearing upon payment of the usual charges for transcripts. At the hearing, the hearing officer may issue in the name of the **Board of Commissioners** notices of hearing requesting the attendance and testimony of witnesses and the production of evidence relevant to any matter involved in the hearing.
4. The **Board of Commissioners**, or the hearing officer, shall conduct a full and impartial hearing on the record, with an opportunity for the presentation of evidence and cross-examination of the witnesses.
5. For hearings conducted by a hearing officer, after all evidence has been presented, the hearing officer shall issue a report based upon the preponderance of the evidence in the record, which includes findings of fact, conclusions of law, an order, and, if violations are proved, recommended penalties as detailed under §1204.8. The Report shall be transmitted to the **Board of Commissioners**, along with a complete record of the hearing if so requested by the hearing officer or the **Board of Commissioners**.
6. The **Board of Commissioners** shall either approve or disapprove the report. If the report is rejected, the **Board of Commissioners** shall remand the matter to the hearing officer for further proceedings. If the report is accepted by the **Board of Commissioners**, it shall constitute the final order of the **Board of Commissioners**.
7. The final determination regarding the imposition of penalties, and the amount thereof, rests within the sole discretion of the **Board of Commissioners**.
8. Penalties and costs shall be assessed as follows:
 - A. Civil penalties shall be assessed at the level of \$100.00 and no more than \$1,000.00 per day of violation; each day's continuation of such violation or failure to abide by the terms of this **Ordinance** is a separate offense;

- B. An inspection fee of \$250.00 shall be assessed by the **District** for each on-site inspection made by the **District** to ascertain or confirm compliance by a violator hereunder with the construction, operation and **maintenance** provision of this **Ordinance** or permit issued pursuant to this **Ordinance**; such inspections(s) shall be made when requested by the **permittee / co-permittee**, or if no such request(s) is (are) made, then upon the compliance date established by an order of the hearing officer and thereafter as circumstances may reasonably require; and
 - C. After a hearing on an alleged violation the hearing officer or **Board of Commissioners** may, in addition to any other penalties imposed, order any **person** found to have committed a violation to reimburse the **District** for the costs of the hearing, including any expenses incurred for the inspection, sampling, analysis, document preparation, administrative costs, and court reporter and attorney fees.
- 9. All penalties specified by the **District** shall be paid within thirty (30) days after the party on whom it is imposed receives a written copy of the order of the **Board of Commissioners**, unless the **person** or **persons** to whom the order is issued seeks judicial review of the order, and obtains a stay of the decision from the circuit court in accordance with the Administrative Review Act.
 - 10. All unpaid penalties shall be considered in arrears thirty (30) days after the order, and shall be subject to additional late payment charges of one and one-half percent per month (1.5%/month) starting from the day of the order, until paid.
 - 11. The Administrative Review Act of the State of Illinois, and the rules adopted under such act, shall govern all proceedings for judicial review of final orders of the **Board of Commissioners** issued under this section.

§ 1205. Revocation of Watershed Management Permits

- 1. In addition to the provisions for administrative and legal proceedings contained in this Article 12, whenever the **Executive Director** determines that a **person** to whom a **watershed management permit** has been issued has wholly failed to remedy the violations stated in a **NOV** issued pursuant to this **Ordinance**; or whenever a **person** has failed to comply with an order of the **Board of Commissioners** issued pursuant to this **Ordinance**; or has failed to comply with a substantive order of a court entered in litigation initiated by the **District**, the Office of the State's Attorney or the United States Attorney, against such **person** for noncompliance with this **Ordinance**; or has failed to promptly pay all civil penalties, inspection fees, or other costs assessed against such **person** in any action taken by the **District**, the **Executive Director** may order such **person** to show cause before the **Board of Commissioners** why the

watershed management permit should not be revoked, except in circumstances where a properly filed appeal is pending.

§ 1206. Stop-Work Order

1. The **District**, upon the **Director of Engineering's** determination, as set forth herein, is authorized to issue an order requiring the suspension of construction of a **development** that is subject to this **Ordinance**.
2. A stop-work order shall:
 - A. Be in writing;
 - B. Indicate the reason for its issuance; and
 - C. Order the action, if any, necessary to resolve the circumstances requiring the stop-work order.
3. One copy of the stop-work order shall be posted on the property in a conspicuous location and one copy shall be delivered by Registered Mail, Return Receipt Requested, or personal delivery to the **permittee / co-permittee**, and/or to the property **owner** or his/her agent.
4. The stop-work order shall state the conditions under which the construction of the subject **development** may be resumed.
5. The **District** shall issue a stop-work order if the **Director of Engineering** determines that:
 - A. **Development** is proceeding in a manner which creates imminent hazard of severe harm to **persons**, property, or the environment on or off the **site**;
 - B. **Development** is occurring in violation of a requirement of this **Ordinance**, or of a **watershed management permit**, and the **District** has determined it is necessary to halt ongoing **development** activity to avoid continuing or additional violations and where significant costs and effort would be incurred should the offending **development** activity be allowed to continue; or
 - C. **Development** for which a **watershed management permit** is required is proceeding without issuance of a **watershed management permit**. In such instance, the stop-work order shall state that the order terminates when the required **watershed management permit** is properly obtained.

6. Any **permittee / co-permittee**, and/or property **owner** aggrieved by the issuance of a stop-work order may appeal the stop-work order as outlined in Article 13.

§ 1207. Additional Remedies for Flood Protection Areas

1. Upon the unauthorized excavation, filling, or modification of a **flood protection area** by any **person**, the **District** may petition the circuit court for an order to restore the **parcel** to its prior condition in order to lessen or avoid the imminent threat to public health, safety, or welfare, or damage to property or the environment resulting from the accumulation or **runoff** of **stormwater** or floodwater, or loss of beneficial function.
2. When, after a diligent search, the identity or whereabouts of the **owner(s)** of any such **parcel(s)**, including lien holders of record, are not ascertainable, notice mailed to the **person** in whose name the real estate was last assessed for taxes, constitutes sufficient notice.
3. The reasonable costs of restoration of the **flood protection area** that are incurred by the **District** shall be recoverable from the **owner** of such real estate in a civil action, together with court costs and other expenses of litigation.

§ 1208. Legal and Equitable Relief

1. The **General Counsel** of the **District** shall take such action deemed necessary to enforce collection and payment of all costs and penalties, to restrain violations of, and to compel compliance with the provisions of this **Ordinance** and with the conditions of any **watershed management permit** issued hereunder.
2. In the enforcement of this **Ordinance**, the **District** shall have the authority to institute, or cause to be instituted, any and all actions, legal or equitable, including appeals, which are required for the enforcement of this **Ordinance** without first exhausting the administrative remedies set forth herein.

§ 1209. Injunctive Relief

1. In addition to the penalties provided in Article 12, whenever a **person** violates any provision of this **Ordinance** or fails to comply with any order of the **Board of Commissioners**, the **District**, acting through the **Executive Director**, may apply to the Circuit Court of **Cook County**, or other Court having jurisdiction, for the issuance of an injunction restraining the **person** from violating this **Ordinance** or failing to comply with the Board Order from making further violations.
2. Notwithstanding any remedies that the **District** may have by statute, common law, or this **Ordinance**, when, in the determination of the **Executive Director**, the

construction, operation, **maintenance, ownership** or control of any **development** subject to this **Ordinance** presents an imminent danger to the public health, welfare or safety, presents or may present an endangerment to the environment, is in violation of this **Ordinance**, or threatens to interfere with the operation of the sewerage system of a **water reclamation facility** under the jurisdiction of the **District**, the **District**, acting through the **Executive Director**, may apply to the Circuit Court of **Cook County**, or other Court having jurisdiction, for injunctive relief to cease and desist such activities without first exhausting administrative remedies set forth herein.

ARTICLE 13. APPEALS

§ 1300. Right to Appeal

1. Any **person** subject to this **Ordinance**, or his authorized representative, shall have a right to appeal to the **Director of Engineering** the denial of, or conditions imposed in, a **watershed management permit**; or the issuance of a stop-work order.
2. Any **person** contesting any final decision, order, requirement, or determination of the **Director of Engineering** made pursuant to §1300.1 shall have the right to appeal to the **Board of Commissioners**.

§ 1301. Appeals to the Director of Engineering

1. All appeals to the **Director of Engineering** shall be made in writing specifying the reasons for the appeal and served upon the **Director of Engineering** within sixty (60) calendar days from the date of denial or conditional issuance of a **watershed management permit**. An appeal of the issuance of a stop-work order must be in writing and served upon the **Director of Engineering** within fourteen (14) calendar days from the date of posting of the stop-work order.
2. The **Director of Engineering** will use his best efforts to respond in writing to a request for an appeal within thirty (30) calendar days of the receipt of a request from the **appellant** and shall schedule an appeal meeting in the letter responding to the request. In the case of an appeal of the issuance of a stop-work order, the **Director of Engineering** shall use his best effort to schedule and conduct an appeal meeting within thirty (30) calendar days of receipt of the request for appeal.
3. When a meeting is scheduled by the **Director of Engineering**, the **appellant** must submit all information pertinent to the appeal. This information must be submitted to the **Director of Engineering** at least fourteen (14) calendar days prior to the scheduled appeal meeting. In the case of an appeal of the issuance of a stop-work order, the **appellant** must submit all information pertinent to the appeal contemporaneously with the request for appeal.
4. The **Director of Engineering** will conduct an appeal meeting and attempt to resolve any bona fide claims, disputes, or inquiries the **appellant** may have. All determinations made by the **Director of Engineering** shall be in writing and a copy thereof transmitted to the **appellant**. The **Director of Engineering** will use his best efforts to transmit these determinations to the **appellant** within sixty (60) calendar days of the appeal meeting. Determinations regarding the appeal of the issuance of a stop-work order shall be transmitted to the **appellant** within fourteen (14) days of the appeal meeting.

5. Should the **appellant** fail to appear at the scheduled appeal meeting, another appeal meeting will not be scheduled unless the **appellant** requests such a meeting, in writing to the **Director of Engineering**, not later than thirty (30) calendar days after the date of the initially scheduled appeal meeting. A second appeal meeting may be granted at the discretion of the **Director of Engineering** upon a finding of good cause as to why the initial appeal meeting was missed. If a properly filed request for a second appeal meeting under this section is denied by the **Director of Engineering**, the **appellant** may file an appeal to the **Board of Commissioners** for the sole purpose of determining the propriety of the **Director of Engineering's** denial. If the **Board of Commissioners** grant the **appellant's** request, then the matter shall be remanded for an appeal by the **Director of Engineering** under the provisions of this section.
6. Any **person** whose request for a **watershed management permit** was denied by the **District** is prohibited from commencing construction of the subject **development**.
7. Any **person** who requests a review of a condition contained in a **watershed management permit** issued to said **person**, may commence construction of the subject **development**, only in accordance with all terms and conditions of the **watershed management permit** as issued to said **person**, and not otherwise in violation of this **Ordinance**.
8. Any **person** who requests an appeal of the issuance of a stop-work order must suspend construction of the subject **development** while the appeal is pending.

§ 1302. Appeals to the Board of Commissioners

1. In the event that the **appellant** does not concur with the determination of the **Director of Engineering**, the **appellant** may petition the **Board of Commissioners** for a hearing. Any petition requesting a hearing by the **Board of Commissioners** shall be made by the **appellant** within thirty (30) calendar days after receipt of the determination by the **Director of Engineering** pursuant to §1301 above.
2. This petition must be in writing by the **appellant** and sent to the **President of the Board of Commissioners**, at 100 East Erie Street, Chicago, Illinois 60611, with a copy to the **Director of Engineering**. Within thirty (30) calendar days after receipt of this petition, the **Director of Engineering** will advise the **appellant** in writing regarding the date on which the **Board of Commissioners** will consider the petition made by the **appellant**.
3. The **Board of Commissioners** shall review this petition and determine whether the petition for an appeal shall be heard by the **Board of Commissioners** itself or by its designee.

4. The **Board of Commissioners** shall establish a panel of independent hearing officers, from which a designee must be selected, to conduct all hearings not presided over by the **Board of Commissioners**. All hearing officers shall be attorneys licensed to practice law in the State of Illinois.
5. The **Director of Engineering** will promptly notify the **appellant** in writing of the **Board of Commissioners'** determination of who shall hear the appeal.
6. The **Board of Commissioners** shall not grant an appeal if the **appellant** failed to timely file an appeal with the **Director of Engineering**.
7. When an appeal hearing is conducted by the designee of the **Board of Commissioners**, the designated hearing officer shall submit a written report of his or her findings to the **Board of Commissioners** with respect to such appeal, along with a complete record of the appeal hearing if requested by the **Board of Commissioners** or by the **District** or by the **appellant** at its own expense.
8. The **Board of Commissioners** shall either approve or disapprove the report of the designated hearing officer. If the report is rejected, the **Board of Commissioners** shall remand the matter to the hearing officer for further proceedings. If the report is accepted by the **Board of Commissioners**, it shall constitute the final order of the **Board of Commissioners**.
9. The scope of any hearing conducted under this section shall be limited to the issues raised by the **appellant** in the **Director of Engineering's** appeal meeting. Technical information that was not submitted by the **appellant** to the **Director of Engineering** under §1301 shall not be utilized in a hearing before the **Board of Commissioners** or its designee.
10. All appeal hearings before the **Board of Commissioners** or the designated hearing officer shall be concluded as soon as practicable.
11. Determinations by the **Board of Commissioners** or its designee shall be effective immediately. The **District** shall provide the final decision and order of the **Board of Commissioners** in writing to the **appellant** within thirty (30) calendar days of entry.
12. Final decisions of the **Board of Commissioners** are subject to the Administrative Review Act.
13. Any **person** who requests an appeal to the **Board of Commissioners** under this section must maintain the status quo during the pendency of the appeal and shall not take any action in contravention of the determination of the **Director of Engineering**.
14. The **Board of Commissioners** shall promulgate procedural rules governing administrative proceedings pursuant to this **Article**.

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ARTICLE 14. ADMINISTRATION

§ 1400. Responsibility for Administration

1. The **District** has the authority and responsibility for the administration of this **Ordinance**.

§ 1401. Role of the District

1. The role of the **District** in the administration of this **Ordinance** shall include all of the following:
 - A. Supervise the execution of this **Ordinance**;
 - B. Review and issue **watershed management permits**;
 - C. Develop and maintain the **TGM**, which will serve as a companion reference to this **Ordinance**;
 - D. Notify **Cook County** governmental agencies, **municipalities**, **authorized municipalities**, **FEMA**, **OWR**, **Corps**, and **IEPA** of any amendments to this **Ordinance**;
 - E. Provide inspections to ensure proper compliance with this **Ordinance**;
 - F. Investigate complaints of violations of this **Ordinance**;
 - G. Grant **variances**;
 - H. Enforce this **Ordinance**;
 - I. Hear appeals;
 - J. Advise, consult with, and cooperate with other governmental entities to promote the purposes of this **Ordinance**; and
 - K. Supervise **authorized municipalities**.

§ 1402. Role of an Authorized Municipality

1. The role of an **authorized municipality** in the administration of this **Ordinance** shall include the following:

- A. Issue **watershed management permits** for **development** activities listed in §201.1 and within its corporate boundaries in conformance with this **Ordinance**;
 - B. Provide inspections to ensure proper compliance with this **Ordinance**;
 - C. Investigate complaints of violations of the **Ordinance**; and
 - D. Advise, consult with, and cooperate with other governmental entities to promote the purposes of this **Ordinance**.
2. An **authorized municipality** shall:
- A. Have legal authority to perform all requirements of an **authorized municipality** under this **Ordinance** and to adopt this **Ordinance** by reference;
 - B. Adopt this **Ordinance**, including all amendments, by reference;
 - C. Participate in the regular phase of the **NFIP**;
 - D. Have no **combined sewers** within its corporate boundaries;
 - E. Employ or retain by contract, adequate staff for all of the following positions:
 - (1) An **enforcement officer**;
 - (2) **Professional Engineer(s)**; and
 - (3) **Wetland specialist(s)**;
 - F. Timely review **watershed management permit** applications and respond within:
 - (1) Fifteen working days of an initial submittal for **developments** not involving **flood protection areas**;
 - (2) Thirty working days of an initial submittal for **developments** involving **flood protection areas**; and
 - (3) Ten working days of a resubmittal;
 - G. Maintain all of the following records;
 - (1) **Watershed management permits**;
 - (2) **Record drawings**;
 - (3) **Structure** improvement data;

- (4) **Elevation certificates;**
 - (5) **Base flood** data and **base flood** maps; and
 - (6) **LOMC, LOMR;**
 - H. Transmit all records specified in §1402.2.G to the **District** upon receipt;
 - I. Issue **watershed management permits** for **development** activities listed in §201.1 within its corporate boundaries in conformance with this **Ordinance**;
 - J. Inspect the construction of all **developments** which require a **watershed management permit** from the **authorized municipality**;
 - K. Notify the **District** promptly for any violation within the **authorized municipality**; and
 - L. Issue local stop work orders for all **violations**, when appropriate.
3. An **authorized municipality** shall not:
- A. Issue **watershed management permits** inconsistent with the provisions of this **Ordinance**;
 - B. Issue **watershed management permits** for **development** activities listed in §201.2
 - C. Issue **watershed management permits** for **development** within **combined sewer areas**;
 - D. Issue **variances**; or
 - E. Hear appeals.

§ 1403. Procedure for Authorization

- 1. A **municipality** seeking to become an **authorized municipality** shall formally petition the **District** through a letter of intent. The letter of intent shall contain all of the following:
 - A. A statement of intent to adopt this **Ordinance** by reference;
 - B. A legal opinion indicating the **authorized municipality** has legal authority to perform all obligations required by this **Ordinance** including:

- (1) The regulation of **erosion** and **sediment** control, **stormwater** management, **floodplains**, **isolated wetlands**, and **riparian environments**;
 - (2) The ability to conduct inspections;
 - (3) The issuance of **watershed management permits**;
 - (4) The enforcement of this **Ordinance**; and
 - (5) The ability to enter into an intergovernmental agreement with the **District**.
 - C. A verified statement of financial capability to perform and adequately fund the obligations of the **authorized municipality**;
 - D. Designation of an **enforcement officer**;
 - E. An implementation plan; and
 - F. Proposed staffing.
2. An intergovernmental agreement between a **municipality** and the **District** shall effectuate the status of a **municipality** as an **authorized municipality**. The intergovernmental agreement shall remain effective unless terminated.

§ 1404. District Oversight of Authorized Municipalities

1. The **District** may inspect any **development** within an **authorized municipality**.
2. The **District** may audit an **authorized municipality** periodically. During an audit, the **District** may:
 - A. Inspect and copy pertinent records kept by an **authorized municipality**;
 - B. Inspect **watershed management permits** issued by an **authorized municipality**;
 - C. Meet with staff of an **authorized municipality**;
 - D. Conduct field inspections of **developments** permitted by an **authorized municipality**;
 - E. Request and copy financial records of the **authorized municipality**;
 - F. Verify that an **authorized municipality** complies with all requirements listed in §1402.2; and

- G. Verify that an **authorized municipality** does not violate any provision listed in §1402.3.
- 3. The **Director of Engineering** shall promptly notify an **authorized municipality** of any of the following deficiencies:
 - A. Failure to comply with any provision of §1402.2;
 - B. Violation of any provision of §1402.3; or
 - C. Breach of the intergovernmental agreement;
- 4. An **authorized municipality** shall remedy any deficiency listed in §1404.3 within thirty calendar days of notice of the deficiency. In cases where a deficiency cannot be remedied within thirty days, the **Director of Engineering** may grant an extension.
- 5. The **Director of Engineering** may either suspend or terminate a **municipality's** status as an **authorized municipality** if the **municipality** fails to remedy a violation in accordance with §1404.4. If a **municipality's** status as an **authorized municipality** is either suspended or terminated, the **municipality** may petition the **Director of Engineering** for reauthorization after all deficiencies are remedied.

§ 1405. Representative Capacity

- 1. Any action to enforce any provision of this **Ordinance** by an elected official, officer, agent, or employee of the **District** shall be taken in the name of and on behalf of the **District** and said elected official, officer, agent, or employee shall not be rendered personally liable.
- 2. Any action to enforce any provision of this **Ordinance** by an elected official, officer, agent, or employee of an **authorized municipality** shall be taken in the name of and on behalf of the **authorized municipality** and said elected official, officer, agent, or employee shall not be rendered personally liable.
- 3. Any action to enforce any provision of this **Ordinance** by an **authorized municipality** shall be taken in the name of and on behalf of the **authorized municipality** and not in the name of and on behalf of the **District**.

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APPENDIX A. DEFINITIONS

Interpretation of Terms and Words

The terms and words used in this **Ordinance** shall be interpreted as follows:

1. Verbs and phrases in the present tense shall be presumed to include the future tense;
2. Parts of speech used in the singular shall be presumed to include the plural, and those used in plural shall be presumed to include the singular;
3. The words "shall," "will," and "must" are understood as mandatory, not permissive; and
4. All distances shall be measured horizontally unless otherwise stated.
5. A masculine, feminine or neuter pronoun shall not exclude the other genders.

Definitions

Words and terms not defined herein shall be understood by their common dictionary definition.

Within the context of this **Ordinance**, the following words and terms shall be defined as follows (except where otherwise specifically indicated):

100-Year Flood Elevation

The 100-year flood elevation is highest elevation of the **BFE**, a project-specific 100-year flood elevation, or the 100-year inundation elevation used in §601.9.

Accessory Structure

A detached, non-habitable **building** without sanitary facilities that is an accessory to an existing **building** and that is less than 200 square feet in area. Accessory **structures** include, but are not limited, to garages and sheds.

Allowable Release Rate

The maximum or actual post-development release rate from a required **detention facility** as specified in §504.3 or §506.3, which is adjusted by existing **depressional storage** and/or **unrestricted flow** areas on the **site**.

ANSI

American National Standards Institute.

Appellant

A **co-permittee** who appeals the **District's** denial and/or imposition of conditions of a **Watershed**

Management Permit or of a **variance** request.

Appropriate Use

The only types of **development** within the **regulatory floodway** that are eligible for a **Watershed Management Permit** as specified in §602.27.

ASTM

ASTM International, formerly known as the **A**merican **S**ociety for **T**esting and **M**aterials.

Authorized Municipality

A Cook County **municipality** authorized by the **District** to issue **watershed management permits** within its corporate boundaries.

Base Flood

The **flood** having a one percent probability of being equaled or exceeded in a given year. The **base flood** is also known as the “100-year flood.”

Basement

Any area of a **building** having its floor below grade (below grade level) on all sides.

BFE

Base Flood Elevation. The height of the **base flood** in relation to the North American Vertical Datum of 1988 that is associated with the **Special Flood Hazard Area** on the effective **FIRM**. The **BFE** shall be determined by the effective Flood Insurance Study (**FIS**) for a **development site** at the time of application as determined by the criteria provided in §601.3 and §601.4.

Board of Commissioners

The nine-member Metropolitan Water Reclamation District of Greater Chicago’s **Board of Commissioners** who are elected by the public.

BSC

Biological Stream Characterization. A program developed by the Illinois Environmental Protection Agency (**IEPA**) in conjunction with biologists from the Illinois Department of Natural Resources (**IDNR**) to aid in the classification of streams throughout the **watersheds** of Illinois. The **BSC** utilizes the Alternative Index of Biotic Integrity (**AIBI**) to classify streams as A, B, C, D, or E. The ratings use fish, macroinvertebrates, crayfish, mussels, and threatened and endangered species information to generate an overall score of biological diversity and integrity in streams.

BSS

Biologically Significant Stream. Streams with a Biological Diversity or Integrity of “A”, “B”, or “C” according to the latest edition of the Illinois Department of Natural Resources (**NRCS**) Office of Resource Conservation: Biological Stream Ratings for Diversity, Integrity, and Significance.

Building

A **structure** that is constructed and is enclosed by walls and a roof, including **manufactured homes**. This term does not include **accessory structures**.

Building Envelope

The delineation **between the interior and the exterior environments of a building** and often depicted as the **building** foundation.

Bulletin 70

Huff, F.A., and J.R. Angel, 1989. "Rainfall Distributions and Hydroclimatic Characteristics of Heavy Rainstorms in Illinois" (**Bulletin 70**), Illinois State Water Survey.

CCSMP

The **Cook County Stormwater Management Plan** adopted by the Metropolitan Water Reclamation District of Greater Chicago **Board of Commissioners** on February 15, 2007, as amended from time to time.

CLOMA

Conditional Letter of Map Amendment. A **FEMA** comment letter on a **development** proposed to be located in, and affecting only that portion of, the area of **floodplain** outside the **regulatory floodway** and having no impact on the existing **regulatory floodway** or **BFEs**.

CLOMR

Conditional Letter of Map Revision. A letter that indicates that **FEMA** will revise **BFEs**, **flood** insurance rate zones, **flood** boundaries, or **floodways** as shown on an effective **FIRM** after the **record drawings** are submitted and approved.

Co-Permittee

A **person** applying for a **Watershed Management Permit**, who must be the **owner** of the land specified in the application, the owner's representative, or a developer with the owner's authorization. In the event, the **co-permittee** is a beneficiary of a land trust that owns the land specified in the application, the **co-permittee** must have power of direction.

Combined Sewer

Sewers intended for the combined conveyance of stormwater **runoff** and wastewater flows. [*Compare combined sewer with sanitary sewer and storm sewer*].

Combined Sewer Area

Areas within the **District's** corporate boundaries that have sewers intended for the combined conveyance of stormwater **runoff** and wastewater flows to a **District** wastewater storage or treatment facility.

Compensatory Storage

An excavated volume of storage used to offset the loss of existing **flood** storage capacity when fill or **structures** are placed with the **floodplain**.

Compliance Report and Schedule

A report that specifies a schedule and final compliance date for which all violations and conditions contained in a **NON – Stormwater** are remedied.

Connection Impact Fee

Fee for annexing to the **District**.

Contiguous

Adjacent to and touching at one point or more; if the lands are separated by an easement or a dedicated right-of-way, it shall be considered contiguous.

Control Volume

The first inch of runoff from the impervious area of development on the site.

Corps

United States Army **Corps** of Engineers.

Corps Jurisdictional Determination

Procedure by which the Corps determines whether it has jurisdiction over a subject water as a waters of the United States. The purpose of a jurisdictional determination is to determine whether a wetland is a Corps jurisdictional wetland. For the purposes of this **Ordinance**, a wetland not under the jurisdiction of the Corps shall be considered an isolated wetland.

Corps Jurisdictional Wetlands

All **wetlands** that are under the jurisdiction of the **Corps**.

Corps Wetland Delineation Manual

The current Corps Wetland Delineation Manual, including any relevant regional supplements, or superseded and as authorized under Section 404 of the Clean Water Act.

Cook County

Cook County is defined as the land area within the boundaries of Cook County, Illinois.

Critical Duration Analysis

Study that determines which **storm event** duration results in the greatest peak **runoff** rate.

Dam

Any obstruction, wall embankment, or barrier, including the related abutments and appurtenant works, that is constructed to store, direct, or impound water. An underground water storage tank is not classified as a **dam**.

Depressional Storage

The volume potentially contained below a closed contour on a one-foot contour topographic map, with the upper elevation determined by the invert of a surface-gravity outlet.

Design Runoff Rate

The **runoff** rate, or flow rates, used to design **major stormwater systems** and determine off-site flow rates. **Design runoff rates** are calculated by using event hydrograph methods.

Detention Facility

A manmade **structure** providing temporary storage of stormwater **runoff** from a **development** with a release rate specified by this **Ordinance**. The **Detention Facility** includes a stormwater storage basin, control structure (or restrictor), and the basin outlet, overflow and inflow pipes.

Development

Any human-induced activity or change to real estate (including, but not limited to, grading, paving, excavation, dredging, fill, or mining; alteration, subdivision, change in land use or practice; **building**; or storage of equipment or materials) undertaken by private or public entities that affects the volume, flow rate, drainage pattern or composition of stormwater, or the **substantial improvement** of an existing **building** in a **Special Flood Hazard Area**. The term **development** shall include **redevelopment** and shall be understood to not include **maintenance**.

Director of Engineering

The Director of Engineering of the Metropolitan Water Reclamation District of Greater Chicago, and his or her designee.

District

Metropolitan Water Reclamation **District** of Greater Chicago. A special-purpose district established by the State of Illinois to, among other things, manage wastewater for an area largely corresponding to **Cook County**, and stormwater in **Cook County**. The **District** is an independent unit of local government with an elected nine member **Board of Commissioners**.

Disturbed Area

Actual land surface area disrupted by construction activity.

Drainage Area

The land area tributary to a given point that contributes **runoff** from rainfall and/or snowmelt.

DWP

Detailed Watershed Plans. A study and evaluation by the **District** to assess the specific conditions and needs for each of the following **watersheds**: Calumet-Sag Channel, the Little Calumet River, the Lower Des Plaines River, the North Branch Chicago River, Poplar Creek, and the Upper Salt Creek.

DWP Inundation Map

A map delineating the **100-year flood elevation** as modeled in the most current version of a **DWP**.

Elevation Certificates

A form published by **FEMA** that is used to certify the **BFE** and the lowest elevation of a **building's** **usable space**.

Enforcement Officer

A municipal official having actual authority from an **authorized municipality** to issue **watershed management permits**, administer this **Ordinance**, and enforce this **Ordinance**.

Erosion

The process of soil particle detachment from the land surface by the forces of wind, water, or gravity.

Erosion and Sediment Control Practice

A temporary or permanent measure that stabilizes soil by covering and/or binding soil particles in order to prevent soil particles from becoming detached by the forces of wind, water, or gravity and intercepts **sediment** in **runoff**.

Erosion Control Practice

A temporary or permanent measure that stabilizes soil by covering and/or binding soil particles in order to prevent soil particles from becoming detached by the forces of wind, water, or gravity.

Executive Director

The **Executive Director** of the Metropolitan Water Reclamation District of Greater Chicago.

Existing Detention Facility

A **detention facility** either permitted under the **Sewer Permit Ordinance** or constructed as of the effective date of this **Ordinance**.

Existing Development Plans List

A list of proposed **development** projects submitted by a **municipality** to the District for which the **municipality** has granted formal preliminary approval.

Existing Manufactured Home Park or Subdivision

A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the **manufactured homes** are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final **site** grading or the pouring of concrete pads) is completed before the effective date of this **Ordinance**.

Expansion to an Existing Manufactured Home Park or Subdivision

The preparation of additional **sites** by the construction of facilities for servicing the lots on which the **manufactured homes** are to be affixed (including the installation of utilities, the construction of streets, and either final **site** grading or the pouring of concrete pads).

Farmed Wetland

A **wetland** that is farmed currently or has been farmed within five years previous to the permit application date.

FEMA

Federal Emergency Management Agency. The federal agency whose primary mission is to reduce the loss of life and property and protect the nation from all hazards (including natural disasters, acts of terrorism, and other man-made disasters) by leading and supporting the nation in a risk-based, comprehensive emergency management system of preparedness, protection, response, recovery, and mitigation.

FIRM

Flood Insurance Rate Map. The current version of a map issued by **FEMA** that is an official community map on which **FEMA** has delineated both the special hazard areas and the risk premium zones applicable to a community together with any amendments, additions, revisions, or substitutions issued by **FEMA** at any time.

FIS

Flood Insurance Study. The current version of a study of **flood** discharges and **flood** profiles for a community adopted and published by **FEMA**, together with any amendments, additions, revisions or substitutions issued by **FEMA** at any time. The **FIS** also includes its associated **FIRMs**.

Flood or Flooding

A general and temporary condition of partial or complete inundation of normally dry land areas from the unusual and rapid accumulation or **runoff** of surface waters from any source.

Flood Protection Areas

Regulatory floodplains, regulatory floodways, riparian environments, wetlands, and wetland buffers.

Floodplain

The area adjacent to and including a body of water where ground surface elevations are at or below a specified **flood** elevation.

Floodproof or Floodproofing

Additions, changes, or adjustments to **structures** or land that prevent the entry of **flood** water in order to protect property from **flood** damage.

Floodproofing Certificate

A form published by **FEMA** that is used to certify that a **structure** is **floodproofed** to an elevation above the **BFE**.

Floodway

The channel and portion of the **floodplain** adjacent to a stream or watercourse that is needed to convey the **base flood** without cumulatively increasing the water surface elevation more than a tenth of a foot.

Floodway Conveyance

The measure of the flow carrying capacity of the **floodway** and is defined using Manning's equation as, $K = (1.49/n)AR^{2/3}$ where "n" is Manning's roughness factor, "A" is the effective area of the cross-section, and "R" is ratio of the wetted area to the wetted perimeter.

Flow-Through Practices

Permanent **volume control practices** designed to treat stormwater **runoff** from **impervious areas** of a **development** after permanent **stabilization** is achieved.

FPE

Flood Protection Elevation. The highest **100-year flood elevation** as determined in §601.9 plus one foot of freeboard.

General Counsel

The General Counsel of the Metropolitan Water Reclamation District of Greater Chicago.

Green Infrastructure

Practices aimed to mimic functions of the hydrologic cycle including infiltration, interception, depression storage, evapotranspiration, and evaporation.

Groundwater

Subsurface water occupying the saturation zone, from which wells and springs are fed. Water found below the normal water table.

High Quality Isolated Wetland

Isolated wetlands that are of the highest value due to their uniqueness, scarcity, function, and/or value as determined by §603.7.

Highest Adjacent Grade

The highest natural elevation of the ground surface next to the proposed walls of a **building** prior to construction.

Historic Structure

Any **structure** that is (a) listed individually in the National Register of Historic Places maintained by the U.S. Department of the Interior or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register, (b) certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district, (c) individually listed on a state inventory of historic places in states with historic preservation programs, or (d) individually listed on a local inventory of historic preservation programs that have been certified either by an approved state program as determined by the Secretary of the Interior or directly by the Secretary of the Interior in states without approved programs.

Hydraulically Equivalent Compensatory Storage

Compensatory storage that can be shown by hydrologic and hydraulic analysis to off-set the increase in **flood** elevations due to **development**.

Hydrology

The science of the behavior of water including its dynamics, composition, and distribution in the atmosphere, on the surface of the earth, and underground.

IDOT

Illinois Department of Transportation.

IEPA

Illinois Environmental Protection Agency.

Illinois Pollution Control Board

A quasi-legislative and quasi-judicial body created under the Illinois Environmental Protection Act. The Illinois Pollution Control Board adopts environmental regulations and hears contested cases.

Illinois Recommended Standards for Sewage Works

The Illinois Recommended Standards for Sewage Works as included in the Illinois Administrative Code. 35 Ill. Adm. Code 370.

Illinois Urban Manual

The Illinois Urban Manual. This manual contains design guidance for a **development site** to meet this **Ordinance's** performance standards for **erosion** and **sediment** control.

Impervious Area

Surfaces that do not readily allow for the penetration of rain into the ground, and include but are not limited to rooftops, paved areas and graveled areas.

Indirect Wetland Impact

A **development** activity that causes the **wetland hydrology** to fall below eighty percent (80%), or exceed one-hundred fifty percent (150%), of the existing condition **storm event runoff** volume to the **wetland** for the 2-year, 24-hour **storm event**.

Industrial Waste

The solids, liquid, or gaseous wastes resulting from any industrial, manufacturing, trade or business process or from the development, recovery or processing of natural resources.

Interest

The property interest or contractual interest, legal or equitable, directly or indirectly, in part or in full, and includes options to buy. In the case of a shareholder interest, the shareholder shall be deemed to have an interest if he owns or controls 5% or more of the shares.

Isolated Waters

All waters including **lakes**, ponds, streams, intermittent streams, and ephemeral pools that are not under the **Corps'** jurisdiction. The limits of the **Isolated Waters** in **Cook County** extend to the **OHWM**.

Isolated Wetland

All **wetlands** that are not under the jurisdiction of the **Corps**.

Isolated Wetland Buffer

The vegetated area adjacent to **isolated wetlands** left open for the purpose of eliminating or minimizing adverse impacts to such areas.

Isolated Wetland Submittal

Submittal required under §306.

Jurisdictional Waters of the U.S.

All waters including **lakes**, ponds, streams, intermittent streams, and ephemeral pools that are under the jurisdiction of the **Corps**.

Jurisdictional Wetlands

All **wetlands** that are under the jurisdiction of the **Corps**.

Lake

A natural or artificial body of water encompassing a surface area of two or more acres that retains water throughout the year.

LOMA

Letter of Map Amen^dment. The official determination by **FEMA** that a specific **structure** is not in a **regulatory floodplain**. A **LOMA** amends the effective **FIRM**.

LOMC

Letter Of Map Change. A letter from **FEMA** which reflects an official revision to an effective **NFIP** map. **LOMCs** are issued in place of the physical revision and republication of the effective map.

LOMR

Letter Of Map Revision. A letter from **FEMA** that revises **BFEs**, **flood** insurance rate zones, **flood** boundaries, or **floodway** as shown on an effective **FIRM**.

LOMR-F

Letter Of Map Revision Based on Fill. A letter from **FEMA** which officially revises an effective **NFIP** map. A **LOMR-F** provides **FEMA's** determination concerning whether a **structure** or **parcel** has been elevated on fill above the **BFE** and excluded from the **Special Flood Hazard Area**.

Lowest Entry Elevation

The elevation at which water can enter a **building** through any non-water tight opening such as a doorway threshold, windowsill, or **basement** window well.

Lowest Floor

The **lowest floor** of the lowest enclosed area (including **basement**). An unfinished or **flood** resistant enclosure, used solely for parking of vehicles, **building** access, or storage in an area other than a **basement** area is not considered a **building's lowest floor**; provided, that such enclosure is not built so as to render the **structure** in violation of the applicable non-elevation design requirement of the Code of Federal Regulations (44 CFR 60.3).

Maintenance

The action required to preserve the original function and prevent failure of systems, which include but are not limited to, **sewage** systems, **major stormwater systems**, constructed **wetlands**, or **green infrastructure**.

Maintenance Activities

In kind replacement, restoration, or repair of existing infrastructure or facilities including, but not limited to, roadways such that they will perform the same functions for which they were originally designed, constructed, and permitted.

Major Stormwater System

That portion of a stormwater system needed to store and convey flows for the 100-year **storm event**.

Manual of Procedures

The **District's** Manual of Procedures for the administration of the **Sewer Permit Ordinance** as amended November 5, 1988.

Manufactured Home

A **building** that is transportable in one or more sections, built on a permanent chassis, and designated for use with or without a permanent foundation when connected to the required utilities. The term **manufactured home** includes park trailers, travel trailers, and other similar vehicles placed on a **site** for more than 180 consecutive days.

Manufactured Home Park or Subdivision

A **parcel** or contiguous **parcels** of land divided into two or more **manufactured home** lots.

Material Change

Any deviation from the approved plans or specifications accompanying an application for which a **watershed management permit** has been issued under this **Ordinance**, that would affect the **runoff**, capacity, flow, or operation of sewerage and/or **major stormwater systems** constructed under said **watershed management permit**.

Minor Stormwater System

All infrastructure including curb, gutter, culverts, roadside ditches and swales, stormwater sewers, tiles, subsurface drainage systems, and other practices intended to convey or capture stormwater runoff from **storm events** less than a 100-year **storm event**.

Multi County Municipality

A **municipality** containing corporate area within both Cook County and an Illinois county located contiguously adjacent to Cook County.

Multi-Family Residential

Residential **parcel** where any **building** contains three (3) dwelling units or more. [*Compare multi-family residential with residential subdivision.*]

Municipality

A city, village, or incorporated town in the State of Illinois, but, unless the context otherwise provides does not include a township, town when used as the equivalent of a township, incorporated town that has superseded a civil township, county, school district, park district, sanitary district, or any other similar governmental district.

Native Planting Conservation Area

Area planted with native deep-rooted vegetation, as approved by the **District**, and maintained in perpetuity to address **unrestricted flow** areas of a **development site**.

New Construction

For the purpose of determining insurance rates, **structures** for which the **start of construction** commenced on or after the effective date of an initial **FIRM** or after December 31, 1974, whichever is later, and included any subsequent improvements to such **structures**.

For the purpose of **floodplain** management, **new construction** means **structures** for which the **start of construction** commenced on or after the effective date of the **floodplain** management regulation adopted by a community and includes any subsequent improvements to such **structures**.

New Impervious Area

Impervious areas that result from **development** or **redevelopment** including new **structures** or **buildings** associated with **development**, new impervious surfaces, and impervious surfaces that are being replaced as part of **redevelopment**.

New Manufactured Home Park or Subdivision

A **manufactured home park** or subdivision for which the construction of facilities for servicing homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final **site** grading or the pouring of concrete pads) is completed on or after the effective date of this **Ordinance**.

NFIP

National Flood Insurance Program. The requirements of the **NFIP** are codified in Title 44 of the Code of Federal Regulations.

Non-Residential

Land uses other than **residential subdivisions**, **multi family residential**, **right-of-way**, or **open space**. **Non-residential** land use may include, but is not limited to, commercial land use and industrial land use.

Non-Qualified Development

Redevelopment area excluded from the **allowable release rate** calculation specified in §504.2 and **detention facility** volume calculation specified in §504.7.

Non-Qualified Sewer Construction

Non-qualifying sewer construction is defined in §700.6 and §700.7.

NOV

Notice of Violation. Notice given to an permittee, co-permittee, and/or any other **person** responsible for an apparent violation of this **Ordinance**.

NPDES

The **National Pollution Discharge Elimination System**.

NRCS

The United States Department of Agriculture Natural Resources Conservation Service.

NWI

National Wetland Inventory. The **wetland** mapping program created by the U.S. Fish and Wildlife Service to provide information on the characteristics, extent, and status of the nation's **wetlands**, deepwater habitats, and other wildlife habitats.

Offsite Detention Facility

A manmade **structure** providing temporary storage of **stormwater runoff** intended to mitigate hydrologic impacts of **development** elsewhere in the **watershed**.

OHWL

Ordinary High Water Mark. The point on a bank or shore at which the presence and movement of surface waters is continuous, leaving a distinctive mark. The mark may be caused by **erosion**, destruction or prevention of terrestrial vegetation, a predominance of hydrophytic vegetation, or other recognized factors.

Open Space

Pervious land to be retained as pervious land which is not part of a larger **development**. **Open space** may include sidewalk, bike path, nature or walking trail **development** less than or equal to fourteen feet in width. [*Compare open space with right-of-way.*]

Ordinance

The Cook County Watershed Management Ordinance.

Other Wastes

All decayed wood, sawdust, shavings, bark, lime, refuse, ashes, garbage, offal, oil, tar, chemicals, and all other substances except sewage and industrial wastes.

Outfall

The end point of any **storm, sanitary, or combined sewer**, providing a point source discharge into a defined **waterway**, or Lake Michigan. **Outfalls** do not include culverts or open conveyances systems connecting two segments of a **waterway**.

Owner

The record title holder or a beneficiary of a land trust which is the record title holder, and includes singular and plural; if the owner is other than an individual, the term includes beneficiaries, agents, shareholders, officers, and directors.

Ownership

The holding or record title or any beneficial **interest**.

OWR

The Illinois Department of Natural Resources Office of Water Resources.

Parcel

Contiguous land area under single ownership or control, under an affidavit of ownership, or under a single legal description on record with the **Cook County** Recorder of Deeds Office.

Permittee

Any **municipality**, municipal corporation, sanitary district, utility company, township government, or any other governmental body required to jointly sign a **Watershed Management Permit** application.

Person

Any individual, partnership, firm, school, district, company, corporation, municipal corporation, association, joint stock company, trust, estate, unit of local government, sanitary district, special taxing district, school district, public utility, political subdivision, county agency, state agency, federal agency, or any other legal entity, or owner, or any legal representative, agent, or assign thereof.

Professional Engineer

A **person** licensed under the laws of the State of Illinois to practice professional engineering.

Professional Engineering

The application of science to the design of engineering systems and facilities using the knowledge, skills, ability, and professional judgment developed through professional engineering education, training, and experience.

Professional Land Surveyor

A **person** licensed under the laws of the State of Illinois to practice land surveying.

Public Flood Easement

An easement acceptable to the appropriate jurisdictional body that meets the regulation of the **OWR**, the **District**, and the **municipality**, that provides legal assurances that all areas subject to **flood**ing in the created backwater of the **development** will remain open to allow **flood**ing.

Qualified Sewer Construction

All public and private new sewers and new sewer connections, exterior to a **building envelope**, including sewer repair and sewer replacement. See 700.3 for a complete list.

Recommended Standards for Wastewater Facilities

The current edition of the **Recommended Standards for Wastewater Facilities**, also known as the Ten States Standards, as published by the Great Lakes—Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers.

Record Drawings

Drawings prepared, signed, and sealed by a **professional engineer** or **professional land surveyor** representing the final "as-built" record of the actual in-place elevations, location of **structures**, and topography.

Recreational Vehicle

A vehicle that is (a) built on a single chassis, (b) 400 square feet or less when measured at the largest

horizontal projections, (c) designed to be self-propelled or permanently towable by a light duty truck, and (d) designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Redevelopment

Any human-induced activity or change to an existing developed property (including, but not limited to, grading, paving, excavation, dredging, fill, or mining; alteration, subdivision, change in land use or practice; **building**; or storage of equipment or materials) undertaken by private or public entities that affects the volume, flow rate, drainage pattern, or composition of the **site** stormwater **runoff** on the previously developed land. The term shall not be understood to include **maintenance**.

Regulatory Floodplain

The **floodplain** as determined by the **BFE** used as the basis for regulation in this **Ordinance**.

Regulatory Floodway

Floodway under the jurisdiction of the Illinois Department of Natural Resources (17 Ill. Adm. Code 1700.30), which consists of portions of the **floodplain** depicted as **floodway** on maps recognized by **OWR**.

Residential Subdivision

Residential **parcel** that is planned to be subdivided for **development**, and where each sub-parcel contains a **building** with less than three (3) dwelling units. [*Compare residential subdivision with multi-family residential and single-family home*].

Respondent

Permittee, **co-permittee**, and/or any other **person** responsible for an apparent violation of this **Ordinance**.

Retention-Based Practices

Permanent **water quality control practices** designed to capture, retain, infiltrate and treat stormwater **runoff** from **impervious areas** of a **development** after permanent **stabilization** is achieved.

Right-of-Way

Public **right-of-way** dedicated as of the effective date of this **Ordinance** including features such as roads and sidewalks. [*Compare right-of-way with open space*.]

Riparian Environment

The vegetated area between aquatic and upland ecosystems adjacent to a **waterway** or body of water that provides **flood** management, habitat, and water quality enhancement or other amenities dependent upon the proximity to water.

Runoff

The water from melting snow and/or precipitation falling within a **watershed** that exceeds the infiltration capacity of the soil of that basin.

Sanitary Sewer

Sewers intended for the conveyance of wastewater. [*Compare **sanitary sewer** with **storm sewer** and **combined sewer***].

Sediment

The suspended soil particles that are transported after **erosion** has occurred.

Sedimentation

The process when the velocity of wind or water is slowed sufficiently to allow the suspended soil particles to settle.

Sediment Basin

A **structure** or area that allows for the **sedimentation** of stormwater **runoff**.

Sediment Control Practice

A **structure** that is designed to intercept **sediment** in **runoff**.

Separate Sewer Area

An area where stormwater **runoff** is collected and conveyed in a **separate sewer**, pipe and/or ditch system to a point of discharge in a receiving natural or man-made **waterway** or other **stormwater facility**.

Service Sewer

A sewer pipe constructed on private property, except for street crossing, that receives flow from a single **building** and connects to a sewer main or lateral.

Sewage

The water-carried human wastes or a combination of water-carried waters from residences, business **buildings**, institutions and industrial establishments, together with such ground, surface, storm or other wastes as may be present.

Sewage and Waste Control Ordinance

The **District's** current **Sewage and Waste Control Ordinance**.

Sewer Permit Ordinance

The **District's** **Sewer Permit Ordinance** as amended in July of 1999.

Sewerage System Permit

A permit required under the **District's** **Sewer Permit Ordinance**.

Silt Fence

A temporary **sediment** control barrier consisting of entrenched geotextile filtering fabric attached to supporting posts that is designed to prevent **sediment**-laden **runoff** from leaving a **site**. The application of a **silt fence** is limited to containment of sheet flow **runoff** from small **drainage areas**.

Single-Family Home

Residential **parcel** containing less than three (3) dwelling units. Single-family home **parcels** subdivided after the effective date of this **Ordinance** are considered as **residential subdivision**.
[Compare single family home with residential subdivision and multi-family residential].

Site

Parcel or **parcels** associated with a **development** or **redevelopment**.

Sole Permittee

Any **person** applying for a **watershed management permit** who provides an acceptable **sewage** treatment plant for the sole, exclusive, and perpetual use of the **owner**, of the property being served thereby, which discharges into any waters or intercepting sewer of the **District** in conformity with the ordinances of the **District**, the rules and regulations of the **IEPA** Division of Water Pollution Control and the statutes of the State of Illinois.

Special Flood Hazard Area

An area having special **flood**, mudslide, mudflow, or flood-related **erosion** hazards and which is identified on a **FIRM** as Zone A, AO, A1-30, AE, A99, AH, VO, V1-30, VE, V, M, or E.

Stabilization, Stabilized

Establishment of vegetative cover, riprap, or other means that minimizes **erosion** on **disturbed areas**.

Standard Isolated Wetland

All isolated **wetlands** other than **high quality isolated wetlands**.

Standard Specifications for Water & Sewer Construction in Illinois

The current edition of the Standard Specifications for Water & Sewer Construction in Illinois published by the Illinois Society of Professional Engineers.

Start of Construction

The date the **building** or development permit was issued, provided the actual **start of construction**, repair, reconstruction, rehabilitation, addition placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a **structure** on a **site**, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a **manufactured home** on a foundation. For **substantial improvements**, the actual **start of construction** means the first alteration of any wall, ceiling, floor, or other structural part of a **building** whether or not that alteration affects the external dimensions of the **building**.

Storm Event

The frequency rainfall event as published in **Bulletin 70**.

Storm Sewer

A sewer intended for the conveyance of only stormwater **runoff**. [*Compare storm sewer with combined sewer and sanitary sewer*].

Stormwater

Precipitation that falls to the ground that does not naturally infiltrate into the subsurface soil.

Stormwater Facility

Structures and measures both natural and artificial which serve as a means of draining surface and subsurface water from land including, but not limited to, ditches, channels, conduits, bridges, culverts, levees, ponds, natural and man-made impoundments, **wetlands**, **wetland buffers**, **riparian environment**, tile, swales, storm sewers, and **waterways**.

Structure

A **structure** is anything that is erected or constructed on or below ground including, but not limited to, **buildings**, **manufactured homes**, **accessory structures**, fences, sheds, tanks, **dams**, sewers, manholes, drop shafts, constructed channels, outfalls, parking lots, driveways, roads, sidewalks, and concrete patios.

Substantial Damage

Damage of any origin sustained by a **building** whereby the cost of restoring the **building** to its before damaged condition would equal or exceed 50 percent of the market value of the **building** before the damage occurred.

Substantial Improvement

Any repair, reconstruction, rehabilitation, addition, or other improvement of a **building**, the cost of which improvement equals or exceeds, individually or in the aggregate, 50 percent of the fair market value of the **building**, determined from the equalized assessed value of the **building** before the **start of construction** of the improvement. This term includes **buildings** which have incurred "**substantial damage**", regardless of the actual repair work performed. The term "cost of improvement" includes the market value of volunteer labor and donated materials. The term "cost of improvement" does not, however, include either (a) any project for improvement of a **building** to correct existing violations of state or local health, sanitary, or safety code specifications that have been identified by the local code enforcement official and that are the minimum necessary to assure safe living conditions or (b) any alteration of a historic **building** or a historic district that will not preclude the **building's** continued designation as a historic **building**.

Subwatershed

Major **watershed** division of a **watershed planning area** as identified in the **District's** Detailed Watershed Plans.

Swink and Wilhelm Mean Coefficient of Conservatism (\hat{c})

The mean coefficient of conservatism (\hat{c}) in an inventory group calculated by the sum of all coefficients in an inventory unit divided by the number of species (N).

Swink and Wilhelm Floristic Quality Index (FQI)

The index derived from floristic inventory data. The index is the arithmetic product of the average coefficient of conservatism (\hat{c}) and the square-root of species richness (\sqrt{N}) of an inventory unit.

TARP

The **District's Tunnel And Reservoir Plan** including all associated structures and appurtenances.

TGM

Technical Guidance Manual. A manual prepared in conjunction with this **Ordinance** that provides technical information and guidance on how to comply with the provisions of this **Ordinance**.

Tributary Area

All land drained by or contributing water to the same stream, **lake**, or **stormwater facility**, or which drains to a common point.

Unrestricted Flow

Stormwater **runoff** from a **development** which is not directed to the required **detention facility** is unrestricted or uncontrolled release or flow. The areas generating unrestricted flow are referred to as unrestricted or uncontrolled release rate areas.

Upstream Tributary Flow

Stormwater **runoff** or groundwater flows from **tributary areas** upstream of a **development site**. **Upstream tributary flows** can be **bypass flows**.

Usable Space

Enclosed space used for dwelling, storage, utilities, or other beneficial purposes including, but not limited to, **basements** and attached garages.

Variance

A grant of relief by the **District** from the terms of this **Ordinance**.

Volume Control Practices

Permanent practices designed to capture, retain, and infiltrate stormwater **runoff** from **impervious areas** of a **development** after permanent **stabilization** is achieved.

Watershed

Tributary areas discharging to a common point.

Watershed Management Permit

A permit established by this **Ordinance** that is issued by the **District** prior to the approval of a **building** or construction permit by the appropriate unit of local government. The issuance of a **Watershed Management Permit** signifies that the proposed **development** is in compliance with the provisions of this **Ordinance**.

Watershed Planning Area

The area considered in a specific **DWP** and depicted on the attached Exhibit A.

Water Reclamation Facility

Facility designed to treat **sewage**.

Water Resource Benefit

A decrease in **flood** elevations, a reduction in **flood** damages to **structures** upstream or downstream of the **development site**, a reduction in peak flow rates, and/or enhancement of existing water-related environmental resources created by the **development** which is greater than the minimum **Ordinance** requirements.

Waterway

Natural or man-made channel, ditch, swale, stream, river, storm sewer, or other receiving **stormwater facility** that is not a sanitary sewer or a **combined sewer**.

Wetlands

Areas which are inundated or saturated by surface or ground water (**hydrology**) at a frequency and duration sufficient to support, under normal circumstances, a prevalence of vegetation (hydrophytes) typically adapted for life in saturated soil conditions (hydric soils). **Wetlands** generally include swamps, marshes, bogs, and similar areas.

Wetland Buffer

The vegetated area adjacent to **wetlands** left open for the purpose of eliminating or minimizing adverse impacts to such areas.

Wetland Impact

Wetlands that are directly or indirectly disturbed or otherwise adversely affected, whether temporarily or permanently, by filling, excavation, **flooding**, or drainage which results from implementation of a **development** activity.

Wetland Mitigation

The process of offsetting **wetland impacts** through the restoration, creation, enhancement, and preservation of **wetlands**.

Wetland Mitigation Bank

A **site** where **wetlands** are restored, established, enhanced, and/or preserved for the purpose of providing compensatory mitigation for authorized impacts. In general, a mitigation bank sells compensatory mitigation credits (acres) to the **co-permittee(s)**, whose obligation to provide compensatory mitigation is then transferred to the mitigation bank sponsor.

Wetland Specialist

A **person** having skill in the art and science of identifying, delineating, and assessing **wetlands**.

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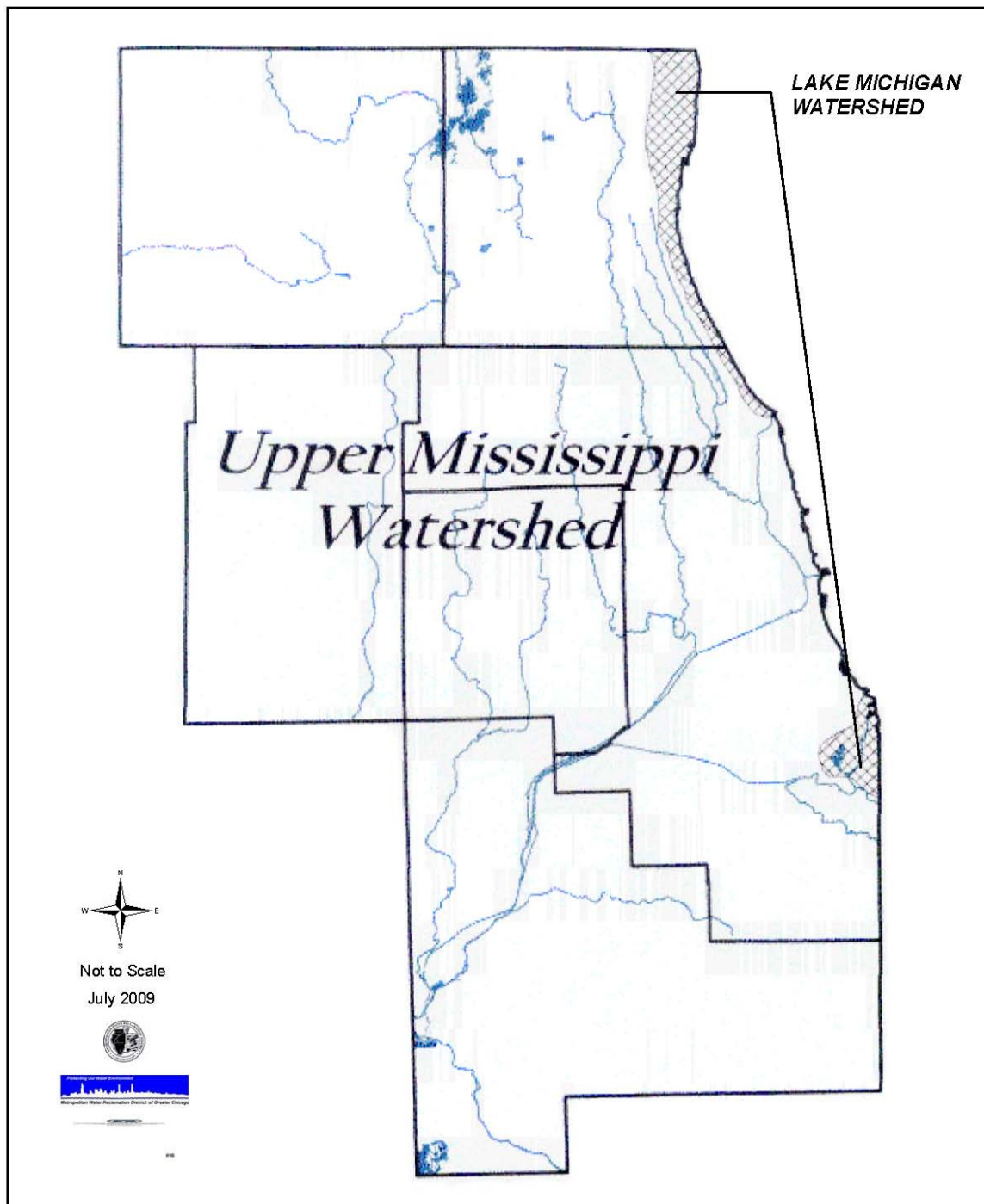
APPENDIX B

Reserved

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APPENDIX C

Reserved



APPENDIX D
US ARMY CORP OF ENGINEERS
WATERSHED SERVICES AREAS

Source: US Army Corps of Engineers, Chicago District

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APPENDIX E

Reserved

APPENDIX F. EXISTING INTERGOVERNMENTAL AGREEMENTS

The intergovernmental agreements referenced in §500.7 include all of the following:

1. Agreement by and between the Metropolitan Sanitary District of Greater Chicago and the Villages of Westchester and Hillside, dated February 10, 1972 and commonly known as the Westchester and Hillside Agreement;
2. Agreement by and between the Society of the Divine Word, Missionary Sisters Servants of the Holy Spirit, and Metropolitan Sanitary District of Greater Chicago, dated August 17, 1975 and commonly known as the Techny Agreement; and
3. Intergovernmental Agreement for Acquisition, Design, Construction, Use, Operation and Maintenance of Stormwater and Recreational Improvements at Heritage Park, dated April 1, 2010 and commonly known as the Heritage Park Flood Control Facility Agreement.